Epistemology, Logic, and Grammar in Indian Philosophical Analysis

BIMAL KRISHNA MATILAL

edited by
Jonardon Ganeri

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If there are no new truths to be discovered,
there are old truths to be rediscovered.

— P.F. Strawson,
Individuals (Introduction), 1959

Kuto vā nūtanaṃ vastu vayam utprekṣituṃ kṣamāḥ/
Vacovinyāsavaicitryamātram atra vicāryatām //

How can we discover a new fact (or truth in philosophy)? Hence (as far as this book is concerned) one should only consider our novelty in rephrasing (the older truths propounded by the ancients in modern terminology).

— Jayanta (*c.* AD 800–950),
Nyāyamañjarī (Introduction), 1936, p. 1, verse 8.

For Daniel H.H. Ingalls

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Preface to the New Edition

The original publication of Bimal Krishna Matilal's *Epistemology, Logic and Grammar in Indian Philosophical Analysis*, was an event of monumental importance in the contemporary study of Indian philosophical traditions. The very title resonates with an entirely new way to think about the subject, an approach that implies a willingness to engage with the thought of the classical thinkers neither as subjects of reverance beyond criticism, nor as dispassionate objects of historical dissection, devoid of the vibrant animacy that characterizes the philosophers' engagement with the world they inhabit. Never before had anyone dared to say that the classical Indian thinkers were, in the first place, epistemologists, logicians, and grammarians, rather than religious seekers or mystics. The thought itself was revolutionary, the execution of the thought brilliant. This book is the uncompromising, audacious statement of a bold new mind. Here, in this book, Matilal puts in place all the key components of an approach to the study of Indian philosophy that would go from strength to strength over the next twenty or thirty years. His depiction of the literature as an extended philosophical dialogue, between the Nyāya exponents of a philosophy of realism and common sense on the one hand, and the Buddhist advocates of a revisionary conceptual standpoint on the other, was itself revolutionary, and this for two reasons. Firstly, the division is drawn, not on religious, but on secular philosophical lines. The Nyāya is not represented merely as a branch of 'Hindu thought', but as a legitimate and well articulated attitude towards central philosophical questions; the same is true of the Buddhist authors discussed. This dialogue, Matilal argues with indisputable persuasiveness, is a philosophical debate and not a clash of religious doctrine. Secondly, Matilal made it clear, again for the first time, that the medium of discussion was one of philosophical argumentation according to carefully considered principles of rational inquiry, rather than juxtaposition of rival soteriological world-views.

The history of Indian philosophy was, with this book, retold decisively, no longer as a history of competing metaphysical frameworks, but

as an extended investigation into the question of knowledge, its grounds, possibility, and domain. Epistemology, Matilal argues, is the key philosophical discipline in the Indian debate, not metaphysics, a claim that does not preclude the discussion of metaphysical questions, but sees their resolution as lying in an analysis of the structures of knowledge and language. This new way of understanding the inner dynamic of the Indian philosophical legacy bore immediate fruit. Texts whose contribution to a religious and soteriological agenda had been hard to determine became, suddenly, of obvious and central relevance to a quite different in-tellectual project, the project of understanding the human mind and its capacities with respect to the world it inhabits. Texts like the *Pramāṇ-samuccaya* and the *Tattvacintāmaṇi*, whose discussions had previously been regarded as obscure and esoteric, now became comprehensible as central canonical statements of epistemological and methodological doctrine.

If Matilal was later to develop the idea with ever greater sophistication and subtlety, that fact does not detract from the breathtaking brilliance of the readings of classical texts one finds here. In its sheer courageousness to think through again the arguments and ideas of the classical authors, to engage with them as vital intellectual presences, *Epistemology, Logic, and Grammar* remains an inspirational and profound masterpiece. Matilal's own willingness to revise and republish the text, after an interval of some twenty years, might itself be taken as an indication of his conviction that both the ideas and the spirit of the the book retain a contemporary relevance. It continues to be required reading by anyone who desires to know why an engagement with the thought of the classical Indian theorist repays the contemporary philosophical mind. In its sheer, outrageous daring, combined with immaculate scholarship, *Epistemology, Logic, and Grammar* is a model for what modern writing on Indian theory ought to be like.

I would like to thank Oxford University Press for bringing out a new edition of this book, which is a landmark in the modern study of Indian philosophy, and yet has sadly been out of print for a very long time. For three decades, this book has served to introduce students of philosophy to the rich traditions of Indian philosophical analysis. In his personal copy, B. K. Matilal made a good number of additions, emendations, and alterations with a view to a new edition of the book. These have been incorporated in the revisions for this second edition.

JONARDON GANERI

Preface to the First Edition

This book is meant as much for the professional philosopher and historian of ideas as it is for the Sanskritist. The latter will find that this work is based on original Sanskrit texts, though I have attempted as far as possible to use modern philosophical terminology in interpreting and, when necessary, reconstructing early philosophic theories.

For the professional philosopher this book tries to present in a Western language an analytical and critical philosophic tradition which is not Western. There has been a widespread prejudice that positive and critical philosophy can only be found in the West. It has been tacitly assumed that critical thinking was unknown in the East, whose 'philosophy' appeared to be limited to primitive speculation.

But recently there has been an increase in interest in the study of Indian philosophy from an analytical point of view. A few books and articles have been published in Western languages which aim to make possible the rigorous comparison of Indian analytical philosophy with its Western counterpart. The disciplined methodology of Indian philosophical analysis is thus beginning to become visible in the West.

The Western student (as well as the modern Indian student) of philosophy faces two great difficulties if he wishes to extend his enquiry to the Indian tradition. The first is the language barrier. This is more than just a question of learning Sanskrit, a very difficult language. Not only is it necessary to learn the language, one must also learn the technical terminology of the philosophers who used that language. To master this technical vocabulary, it is not enough to have recourse to the standard dictionaries which rarely reveal to the student the subtle technical uses of a term confined to often impenetrably difficult texts. It is a bit like expecting a dictionary to reveal the true meaning of the word 'love'.

To put it in philosophical terms, knowledge of Sanskrit is perhaps a necessary, but never a sufficient, condition for understanding Indian

philosophy. But it is a pity that there were, and still are, people who expect Sanskritists and Indologists to be expert authorities of not only Indian philosophy and literature but also Indian art, Indian archaeology, Indian astronomy, Indian medicine, Indian grammar, and Indian what not. Fortunately, the number of such people is decreasing now. It is, of course, true that a good many Sanskrit philologists have been quite brilliant in their own discipline and should be complimented for their contributions. But it is not surprising that some of them have failed to see the interest of epistemological enquiries or the value of translating technical philosophical Sanskrit into technical philosophical English, neither of which they were familiar with.

The second difficulty of the modern Western student is not really a difficulty but simply the misconception about the nature and business of Indian philosophy to which I have alluded earlier. As a result of this misconception, Western analytical philosophers tend to ignore Indian philosophy as apparently holding no interest for them.

In fact, this second difficulty may be viewed as a reflex of the first. But the mass of publications which purport to be about 'Indian philosophy' generally written by people who are totally unqualified in the discipline and which earns the boredom and annoyance of the professional philosopher, requires a little further comment: 'Indian philosophy' has unfortunately come to denote a group of occult religious cults, a system of dogmas, and an odd assortment of spirituality, mysticism, and imprecise thinking, concerned almost exclusively with 'spiritual liberation'. Books, pamphlets, and other materials dealing with this theme are quite considerable in number and unfortunately too easily available.

In fact, available books in any modern language today fall broadly under two categories: works of wild and unauthentic generalization along with cheap popularization, and works of philological scholarship which demand from readers knowledge of a whole field of Indological research extending over centuries. A person who wishes to pursue a serious study of Indian philosophy is usually caught between these two streams. Philological research is, of course, essential. However for philosophical studies, it should be treated not as an end but as a means to an end.

What, one may ask, could be the reason for the overwhelming presence of this misconception about Indian philosophy? One reason is this: When the study of Indian philosophy was first introduced in the West, most of the leaders connected with this movement were fascinated by the highly speculative metaphysical systems (which, in our opinion, fall in

the area of overlap between religion and philosophy) of India, and were attracted toward the mystical and spiritual atmosphere that could be created by the somewhat modified interpretations of these systems.

Moreover, India, after a period of stagnation followed by several centuries of foreign domination, was facing the challenge of modern civilization and the superior technology of the West, and, as a result, was desperately looking for an identity and a way of self-assertion. Some of the national leaders of India at this stage sought an escape in the mystical aura of so-called Indian 'spirituality'. All these are unfortunate historical facts—unfortunate because Indian philosophy, as a result of this movement, has remained identified with mysticism and mistakenly thought to be inseparable from religion.

The results of recent research have revealed beyond doubt that a considerable portion of Indian philosophy consists of a number of rigorous systems which are more concerned with logic and epistemology, with the analysis and classification of human knowledge, than they are with transcendent states of euphoria. Verifications and rational procedures are as much an essential part of Indian philosophical thinking as they are in Western philosophical thinking. Thus, neglect of the study of Indian philosophy in modern philosophic circles is obviously self-perpetuating, for no one but the analytical philosophers will ever be able to recognize and make known in Western languages the counterpart to their own discipline.

In fact, the present author strongly feels that the study of Indian philosophy is not simply necessary from a cross-cultural point of view, or from the viewpoint of understanding the 'Indian mind' (if there is such a thing), but that it is most urgently needed for increasing creativity and comprehensiveness in the philosophic endeavours of modern professional philosophers.

What has been stated above reflects my general attitude as it is embodied in this book. But I do not claim to have given in the following pages even the bare essentials of what I believe the term 'Indian Philosophical Analysis' covers. I have chosen several topics and concepts which concern the disciplines of epistemology, logic, and grammar, and I have tried to reconstruct the theories of various classical Indian philosophers regarding these concepts.

It may be observed that the views of Indian philosophers about logic and the philosophy of language were to some extent influenced by the peculiarities of the Sanskrit language. But this need not be regarded as a drawback, for it goes without saying that the existence of many natural

languages with radically different structural and logical characteristics offers opportunities for logical explorations of 'ways of thinking' far more diverse than those found in any one of them singly. In general, I have tried in the following pages to avoid difficult Sanskrit expressions as far as is practicable. I have remarked earlier that knowledge of Sanskrit is an important aspect of the study of Indian philosophy. In writing this book, however, I have tried to maintain a style which will presumably make the discussion intelligible to any interested student or philosopher even when he or she lacks a knowledge of Sanskrit. At the same time I have tried my best not to misinterpret the ideas in the ancient texts.

My approach to the classical Indian philosophers has primarily been that of a critical philosopher, and I have tried consciously to use the method of 'comparative philosophy'. It must be admitted at the same time that my interpretation and reconstructions here are necessarily conditioned by my understanding of the philosophical problems. All the discussions presented here can certainly be subjected to further scrutiny and eventual modification.

I believe that anyone who wants to explain and translate systematically from Indian philosophical writings into a European language will, knowingly or unknowingly, be using the method of 'comparative philosophy'. In other words, he cannot help but compare and contrast the Indian philosophical concepts with those of Western philosophy, whether or not he is conscious of so doing. Otherwise, any discourse on Indian philosophy in a Western language would, in my opinion, be impossible. Thus, 'comparative philosophy', in this minimal sense, should no longer be treated as a derogatory phrase. Rather, when pursued with sufficient care and an informed conviction, this method may lead to some interesting results.

My procedure can also be justified from another more general point of view. The central themes of philosophical endeavour change very little over the ages. But the critical idiom of philosophy keeps changing not only as we move from one tradition to another but also as we move from one generation to another. The everchanging idiom of philosophical writing reflects sometimes the climate of thought of a particular age as well as of a particular country or tradition, and sometimes the personal style of thinking of the individual philosopher. Thus, rethinking as well as rephrasing older philosophical thinking becomes a very useful method in philosophical research. In rethinking some thoughts of the ancient and medieval Indian philosophers in contemporary terms, I, therefore, have

not violated any convention for which I might owe an apology to modern professional philosophers.

There are five different chapters in this book, each bearing a different chapter title. They are not five independent essays. The basic philosophic problems discussed in each one of them are all interrelated. The fundamental philosophic problem which appears in different forms again and again in all the five chapters may be formulated as follows.

There is a very well established philosophical tradition in India, which tries to maintain that reality lies beyond the reach of language and construction (that is, discursive thinking). In other words, the real world is inexpressible in terms of concepts. There is also the opposite philosophic thesis which tries to show that reality is knowable and hence expressible in language. The structure of our knowledge reflects the structure of the real world. One side in the philosophical debate of these two opposing views is represented by the various forms of Buddhism, while the other side is represented by the non-Buddhist schools, chiefly by the Nyāya-Vaiśeṣika. The debate and interaction of these two opposing sides constitute the central theme of this book.

The reader may wonder why the last chapter should deal with the Mādhyamika position and why the book should end with some comments on mysticism. I shall answer the first question and comment on the second. It might have been more desirable to deal with the schools and systems in their chronological order. But while I have kept in mind the relevant historical background of each philosophical theory discussed here, I have not paid much attention to the chronological order of different schools unless such chronology is directly relevant to the philosophical theory in question. Thus I have dealt with the approach of the grammarians to the problem of philosophical semantics in the third chapter, although they represent comparatively ancient views. Chronologically, Nāgārjuna of the Mādhyamika school is earlier than most Nyāya writers. But the kind of analysis of the Mādhyamika position that I have proposed in Chapter 5 presupposes a knowledge of some advanced points of logic and epistemology. Hence I have discussed the Mādhyamika position after I have developed those points in earlier chapters.

As regards the second point, I have no intention of arguing in favour of any form of 'mysticism'. But I must acknowledge that I feel there is a sense in which reality can be said to remain quite untouched and unrevealed by our cognitive acts, linguistic functions, or conceptual constructions. The Mādhyamika, and perhaps the Advaita Vedānta,

emphasize this point far more seriously than any other Indian school. I have simply tried to make it clear that the challenge of the Mādhyamika school be taken seriously and answered accordingly.

The reader will see that besides using as little Sanskrit as possible I have used single quotes in this book in many places without reservation. The single quotes used here have an additional function: viz., that of indicating either that a word or a phrase is an approximate equivalent of some technical (Sanskrit) term, or that it is used in a special sense, rather than in its ordinary sense, which is to be understood from the context. It is expected that these different uses of single quotes (as well as double quotes) will not be confusing because the philosophical arguments in which these quotes are used should always make their sense clear.

My special thanks are due to Professors Karl H. Potter and G.M.C. Sprung who, by inviting me to the two Philosophy Workshops, allowed me to share my thoughts with others. Thanks are also due to Professors Anthony K. Warder, Hans Herzberger, and George Cardona for helpful criticisms which have been incorporated in this book. I wish to thank my old friend, Jeff Masson, who took an active interest in this book and offered some vital points of criticism. I thank also Professor P.F. Strawson and the publishers Methuen and Co. for giving me the permission to use the quotation at the beginning of the book. Last but not least, I wish to thank my wife, Karabi, for assisting me in ways too numerous to mention.

University of Pennsylvania BIMAL KRISHNA MATILAL
15 March 1970

Chronological Table of Philosophers

The following table shows the relative chronology of different philosophers discussed in this book. The dates given are very tentative.

c. 500–400 BC	(Gautama The Buddha)
c. 450–350 BC	Pāṇini
	(Vyāḍi), (Vājapyāyana)
c. 300–200 BC	Kātyāyana
c. 200–100 BC	Patañjali
c. 200–0 BC	*Vaiśeṣika-sūtra* (Kaṇāda)
c. 150	Nāgārjuna
c. 100–200	*Nyāyasūtra* (Gautama Akṣapāda)
c. 300–400	Vātsyāyana, Śabara
c. 350–500	Asaṅga, Vasubandhu
	Bhaṛtrhari
	Diṅnāga, Praśastapāda
	Bhāvaviveka
c. 500–600	Uddyotakara, Candrakīrti
c. 600–700	Kumārila, Prabhākara
	Dharmakīrti
c. 700–850	Śāntarakṣita, Kamalaśīla, Śālikanātha
c. 800–950	Vācaspati Miśra, Jayanta
c. 900–1200	Śrīdhara, Helārāja
	Kaiyaṭa
	Udayana, Śrīharṣa
c. 1300–1400	Gaṅgeśa, Vardhamāna
c. 1700–1750	Nāgeśa, Gadādhara

1

Perception and Language

CHRONOLOGICAL NOTE. The *Nyāyasūtras*—'aphorisms of the *Nyāya* system'—were compiled between 100 BC and AD 200. Nāgārjuna effectively established the Mādhyamika school of Buddhism in the latter half of the second century AD. It is difficult to determine the exact chronological relation between Nāgārjuna and the final compilation of the *Nyāyasūtras*. While certain *sūtras* seem to be pre-Nāgārjuna, others were probably compiled after Nāgārjuna. For a discussion of this chronological problem, see G. Tucci, 'Introduction'.

Vātsyāyana wrote a commentary on the *Nyāyasūtras* called *Nyāyabhāṣya*. His date is also a matter of conjecture. E. Frauwallner and G. Oberhammer place him between AD 400 and 500. They argue that Vṛṣagaṇa (*c*. AD 350), the great Sāṃkhya philosopher and the author of the lost *Ṣaṣṭhitantra*, was the teacher of Vindhyavāsin who must be senior to Vātsyāyana. But if one considers Vātsyāyana's style one will be in favour of a much earlier date than AD 500. Vātsyāyana must be earlier than Diṅnāga because Diṅnāga criticized Vātsyāyana. I place him between AD 300 and 400 as a working hypothesis.

Vasubandhu preceded Diṅnāga. Sthiramati was a student of Vasubandhu and wrote a commentary on his teacher's *Vijñaptimātratāsiddhi*. Bhartṛhari, the great grammarian-philosopher, must be a senior contemporary of Diṅnāga (see Frauwallner 1959) because Diṅnāga apparently had Bhartṛhari's work before him when he wrote his *Traikālyaparīkṣā*. Praśastapāda, the Vaiśeṣika philosopher, was a junior contemporary of Diṅnāga. Dharmakīrti was the most important exponent of the Diṅnāga school in the seventh century.

Śāntarakṣita and his disciple Kamalaśīla flourished in the ninth century and expounded Diṅnāga's views on *pramāṇas*. For Uddyotakara and Kumārila, see chronological note to Chapter 2.

1.1. GENERAL REMARKS ON THE PROBLEM

I shall try to reconstruct here the positions of certain Indian philosophers on some basic problems of epistemology. In general, these

problems are connected with the nature of what is 'given' and with what we 'construct' or 'manipulate' out of this 'given'. In a narrower sense, I shall be concerned here with the relation of our perception and thought-construction to our speech or language. And this will take us eventually into a more general discussion on the status of meaning. Ontological issues will arise at every stage of our discussion and will be tackled in a general way.

A word to justify the procedure I shall adopt here: My interest for the present is not philological, although I will be dealing with the philosophical theories in their historical perspective. Each philosopher I discuss constructed his own philosophical system and tried to explain the basic problems of philosophy with particular reference to that system. However we are concerned here not with the full description of those individual systems, but rather with some particular problems which have occurred in their philosophical writings in various forms. I shall outline only as much of these systems as will be necessary to understand the theory under discussion.

Let us formulate some important questions in simple language: What is the status of what *appears* in our cognition? How do we cognize or conceive that there are *external* objects? How is language related to reality? What relation does our language bear to our perceptual cognition?

With the possible exception of what we may call our 'bare acquaintance' of the 'given', our cognitive acts always involve some kind of 'construction' or 'manipulation'. This manipulation or construction may have an objective basis, an objective referent to which it is directed, but it certainly eludes a one-to-one correspondence with any object in the real or objective world. We cannot really define the 'objective world' because to do so leads inevitably to circularity or mutual dependence. But we can give a *prima facie* sense to the expression 'objective world'. It is that much of the world which is, in a sense, independent of our manipulation, our thought-construction.

Let us concentrate for the moment on perception. It is possible to argue that subjectivity plays, if at all, only a minor role in perception. The dispute may eventually develop into a dispute over the definition of perception which I am using here to translate the Indian term 'pratyaksa', or how we propose to use the term 'perception'. Philosophers in India have differed on this point. There are also other factors which have determined the nature of this dispute. One is the philosophical conviction of the disputant. But this is very rarely mentioned,

although always understood, in a dispute over the epistemological problems.

Apart from data and construction, there is a third element which will enter in our discussion. This is language or speech. This comes in inevitably, and offers a common basis for discussion about cognitive states. What each person constructs for himself on the basis of subjective, inner needs, remains sealed off from the imaginative constructs of other people. It is only our often hesitant (there is, after all, the danger of the contamination or even destruction of our private universe, often regarded by others as mere illusion) willingness to attempt verbal communication that allows us to form any idea at all of another person's inner world. Thus the question arises whether what we grasp in perception is exactly represented in our verbalization.

However, rather than proceed in such general terms, let us investigate the versions of individual philosophers of India in a systematic manner.

1.2. EARLY NYĀYA THEORY OF PERCEPTION: (*NYĀYASŪTRA* 1.1.4 AND VĀTSYĀYANA)

The awareness of the epistemological problem mentioned above can be traced in *Nyāyasūtra* 1.1.4. A somewhat cryptic formulation of this problem is found in the *Nyāyabhasya* of Vātsyāyana under *Nyāyasūtra* 1.1.4. The author of the *Nyāyasūtras* defined perception as a piece of knowledge or a cognitive state which is born out of sense-object contact and which is to be differentiated from verbalization or from its representation in words. There are two other adjectives in the definition given in the *Nyāyasūtra*. They imply that perceptual knowledge (*pratyakṣa-pramā*) must be distinguished from (a) perceptual error and (b) the uncertain attitude leading to a perceptual doubt.

All these qualifications in the definition gave rise to a vortex of controversies among the later critics and commentators. Incidentally we find in this context development of many interesting epistemological theories. For our purpose, we shall concentrate upon the adjective *a-vyapadeśyam* 'which is not, or cannot be, verbalized'.

The Sanskrit word for 'perception' is *pratyakṣa*, one element of which is *akṣa* meaning 'sense organ'. Thus, perceptual cognition, in the writings of any Indian philosopher, should be described as being dependent, in some way or other, upon the senses. Apparently, the author of the *Nyāyasūtra* was concerned with the definition of sense

perception and tried to say that we should not confuse a perceptual state, or, for that matter, a cognitive state, with the representation of that state in language. In most cases, our cognitive state is associated with some word or name. But this may lead to the natural assumption that there is no cognitive state without language. Further it might lead us to believe that perception and its verbalization are inseparable from, and hence identical with, each other. Thus, the *Nyāyasūtra* wants, perhaps, to point out that sense perception can take place even when the words denoting the object have not been learned—a clear case where we are forced to make a cautious distinction between perception and the verbalization of a perceptual state.

Vātsyāyana, while commenting on *Nyāyasūtra* 1.1.4, notes a view which says that things are usually designated by words in our language and our conception of each thing occurs along with the word. Conception gives rise to verbalization. Since our language lacks a system of terms to designate the conception of each thing, we designate it by the name of that thing. Thus, even the sense perception of a thing, say a blue colour, is designated by 'blue colour'. The distinction between the cognitive act and the naming or designating act becomes blurred in this way. In order to warn us against this confusion, the author of the *Nyāyasūtra* has added that sense perception is, in principle, unconnected with the object's designation in language.

But this seems to be the view of a critic rather than a commentator. If all cognitive states were inextricably mixed with their verbalizations, any attempt to distinguish them would fail. Vātsyāyana, however, suggests a better explanation in the next passage. In the sense perception of a child (who has not yet learned words to designate things) words do not play any significant role. When a person learns the name of a thing and perceives that thing, he says that it is called such-and-such. But, as far as his awareness of that object is concerned, it does not differ very much from the case of a child's perception. This shows that designation by name is not an essential factor in our perceptual process or cognitive act.

Vātsyāyana acknowledges the fact that we conventionally designate our apprehension of an object by the name of that object. But he also points out that we can, and sometimes do, use artificial means to indicate whether our designatum is the object itself or our apprehension of that object. For example, in Sanskrit, we use the term *iti* (comparable to modern quotation marks) to indicate that it is not the object that we have in mind. It is argued that in order to communicate among ourselves through language (that is, at the time of engaging in worldly

affairs—*vyavahāra*) we need a designating word for our apprehension of the object. Without such a designating word to go along with our conception, verbalization and hence communication through language would be impossible. Vātsyāyana argues that we need this artificial means of adding *iti* for naming the apprehension of an object only when we want to communicate among ourselves through language. But this naming is inessential as far as our awareness of the object is concerned. Perception is different from verbalization.[1]

Vātsyāyana's interpretation leaves many points unexplained or unsatisfactorily explained. It also leads to many other problems. But the distinction, made for the first time, between conception and its phonological realization, may be attributed to Vātsyāyana (or, to the philosopher whose view he was reporting). A child might be said to have concepts before he acquires the corresponding words. In modern discussions about language since Chomsky, it is customary to talk in terms of two levels of language: the level of 'deep' grammatical structures to be contrasted with the 'surface' structures. Without doing a great deal of damage to these two well-entrenched concepts, I wish to twist them a little in order to make an observation. There was a standard view (championed by Bhartṛhari, see section 1.4 below), according to which there cannot be a cognition without language: 'no concept without some word or another.' The child's perceptual cognition, on this view, would have to be perpetrated with words—*implicit* or *tactic* words. How can we make sense of this acquisition of the appropriate words by the child before he has learnt the language? We may say that the child has an inborn linguistic ability such that he possesses knowledge of the 'deep' structure of language, whereas what he learns later on is its 'surface' structure. One can thus maintain that the child's cognition is also *linguistically* based at the level of 'deep' structure. Vātsyāyana is, however, arguing against such a view.

1.3. THE RISE OF IDEALISM

Before proceeding any further we should note some other developments in the field of Indian philosophy, developments which affected to a considerable extent later epistemological and logical theories. The Buddha himself, to judge from later works, represented a thoroughly critical attitude to all speculative philosophies and to all dogmas. In

[1] I have tried to give here a reasonable interpretation of the rather obscure passage of Vātsyāyana.

early Buddhism there was thus a consistent attempt to reject the concept of a person, the idea of a soul as a persisting entity through the ever fluctuating mental as well as physical states. The concept of soul was replaced by the five aggregates, that is, the aggregates of matter and different mental states and dispositions. Perception was one of them. Early Buddhism accordingly defined perception as something dependent upon the cooperation of three factors, object (*rūpa*), an organ such as the eye, and pure consciousness.[2] There is no perceiver but only perception based upon the object and senses.

Nāgārjuna carried the critical attitude of the Buddha to its logical extreme. Not only was the 'perceiver' rejected but also the perceived object or the percept as well as perception itself. Nāgārjuna used the early Buddhist doctrine of dependent origination, and tried to show that in reality there is no logical justification for assuming the reality of anything at all. All our concepts, whether of perception or of the perceptible, are empty (*śūnya*) in the sense that none of them can claim absolute existence or independence. Existence, in Nāgārjuna's philosophy, should be absolute and independent, unrelated and pure.[3] What I have given above is of course only a paraphrase of Nāgārjuna's Mādhyamika philosophy, but I do not believe it involves any distortion. In a later chapter I shall deal with the actual presentation of the Mādhyamika philosophy.

Historically, the rise of the *Yogācāra* school of Buddhism, also called *Vijñāna-vāda* 'Consciousness school', was a reaction and re-examination of the 'emptiness' doctrine of Nāgārjuna. Asaṅga and Vasubandhu argue that all concepts and entities are empty or without their 'own nature' because they are imagined by, and hence essentially dependent upon, consciousness; but the 'imaginer' of the unreal (*abhūtaparikalpa*), that is, consciousness, exists. There is no real duality in consciousness, no subject-object dichotomy. The so-called 'given' is nothing but modes of consciousness in perpetual flux. The appearances of duality, the 'given' and the receiving, the apprehended and the apprehension, are all 'our doing', results of our manipulation or construction. Non-existent objects appear in consciousness as they do unquestionably in false cognition or dream states. Besides these appearances, they have no other reality.[4]

Idealists in the East often claim that they prefer a subjective inner

[2] See *Kathāvatthu*, p. 374.

[3] Nāgārjuna [MK], verse 9 of chap. 18.

[4] Vasubandhu, *Viṃśatikā*, verses 1–3.

world of feelings to an external world of real objects because, they say, the inner world actually possesses a greater degree of clarity. What precisely they mean by this term is seldom made clear however and one is left with the feeling that such remarks are often merely the prelude to their abdication of rational discourse. If a man repeatedly claims that everything he experiences defies language, one can begin to suspect that he is simply unwilling to make the attempt. Often such hyperbolic statements mask the speaker's own uncertainties about the ultimate value of his subjective imaginings. This attitude is present in the Yogācāra school of Buddhism. From now on, I shall designate this school as *Idealism.*

Consciousness, or rather the consciousness-moment, creates its own object and imagines the whole universe. External reality is a figment of the imagination (*kalpanā*), and that which imagines it, that is, the stream-of-consciousness moments, is the only real thing. Thus, in one sense, reality is non-dual (*advaya-tattva*) because it is 'consciousness only' (*vijñāna-mātra*). Due to an inherent tendency of humans to externalize the internal (or, to look for the wrong thing, so to say), our cognitive states, which are like waves in the sea of consciousness, grasp themselves as their own objects.

If we strip aside the metaphysical aspect of Buddhist idealism we see that this philosophical position had serious implications. This became increasingly clear in the later phase of its development. An external entity is, in this school, only a fragment of imagination; its existence can never be proved or established. 'Whatever imagination imagines or constructs is only fragment of imagination a mode or modification of consciousness, and hence it does not exist (outside consciousness) and everything is consciousness only.'[5] Sthiramati comments that if consciousness had the nature of revealing real external objects, there would be no cases of illusory appearance, hallucinations, and dream states. In short, the reality of external objects vanishes into insignificance when examined by the standard of absolute existence just as everything in the Mādhyamika system dissolves into emptiness when considered from an absolute point of view.

In spite of the important difference between the Emptiness doctrine and Idealism, there is one significant agreement between these two schools. Nāgārjuna, being quite consistent with his critical and dialectical method, did not elaborate upon the nature of non-dual reality. But he indicated that it lies beyond the reach of ordinary cognitive states

[5] Vasubandhu, *Triṃśikā*, verse 17.

and thoughts; it is beyond the description of our language.[6] Any description would be a distortion of the real nature. The Buddhist idealists also try to say that reality is not captured in our speech or expressed by ourlanguage. Translated in terms of data and construction this thesis may be stated as follows: The meaning of a linguistic expression is to be found in the 'construction' side of our cognitive act, the data being independent, standing in isolated glory. The data are, according to them, consciousness-moments. Whether this is a tenable theory or not, that is, whether there is any logical compulsion that data should be kept totally isolated from construction, we shall examine later (chapter 2).

1.4. BHARTṚHARI'S THEORY OF KNOWLEDGE: 'CONSTRUCTION' (*VIKALPA*)

The interesting point of Bhartṛhari's theory will be better understood when we realize that he developed his monistic metaphysics in the milieu of this Buddhist idealism. If one sloughs aside the metaphysical monism of Bhartṛhari's system, one can maintain that his contribution to epistemology lies in the fact that he recognized quite clearly the very significant role of language in the structure of empirical knowledge.

The Buddhist idealist asserts that the phenomenal world is just a construction of our imagination because each of our cognitive states, which can be regarded as modes of consciousness, cannot reveal anything beyond itself. Bhartṛhari goes further and adds that the form and shape of our cognitive states come from our language. It is obviously implied that our categorization of the world is determined by the structure of our language. Whether this theory is of a piece with the belief of some modern linguists (like Edward Sapir or Benjamin Whorf), that different societies with different languages live in distinct WORLDS is a question we need not go into here. Out interest lies here in Bhartṛhari's assertion that our initial cognition starts with language, with words, and names.

There is a striking similarity between the argument of Bhartṛhari and that of the Buddhist idealist. Ordinarily we think that so-called external objects have the predominant claim to reality. The Buddhist idealist claims that they appear as real only insofar as they are externalized by our imaginative construction. Bhartṛhari claims that they appear as real only insofar as they are expressed in language.

[6] See Nāgārjuna [MK], verse 9 of chap. 18 and Chandrakīrti's commentary.

According to Bhartṛhari, there cannot be any cognitive state in this world without the imprint of words. Word, or rather 'the implicit speech element', is the seed (*bīja*) which enlightens our consciousness of the object. The latent word in the speaker generates the cognition when he (is conscious of some object and by expressing that word he) awakens the latent word in the mind of the hearer and in this way the latter becomes conscious of that object. If consciousness were to operate without our linguistic potency, we would be left with an impotent consciousness which could not reveal any object.[7]

It is argued that 'implicit speech' is inherent in the nature of our cognitive states just as illumination is in the nature of fire. One cannot be separated from the other, and hence the two are indistinguishable. Even our perceptual consciousness of an object involves, for all practical purposes, conceptualization and interpretation, and hence can hardly be differentiated from our linguistic habit which goes with it. Conceptualization and interpretation operate with words and names, which may be either uttered or unuttered. Whenever our 'pure' sensation penetrates into the cognitive level, it invariably penetrates, according to Bhartṛhari, into the linguistic level or our 'implicit speech' level.

The notion of 'implicit speech' need not create any difficulty in understanding Bhartṛhari's position. Our overt speech may be looked upon as the phonological realization of covert or implicit speech. Bhartṛhari has an interesting discussion on the analysis of two types of word, two different levels of speech. But this will take us beyond the scope of this chapter and involve us in the full exposition of Bhartṛhari's system.[8] It will be enough for our present purpose to note that covert speech or the implicit word is always present at the cognitive level along with the object revealed by the cognitive state. For example, in our first acquaintance with an external object we may not grasp any special feature, that is, any 'quality', of that object. When no 'quality' is grasped, we cannot have a 'ground for applying' (*pravṛtti-nimitta*) any word or linguistic expression overtly or covertly to that object.[9] But this rarely happens because we can always find a way to use overt speech or apply an actual word to it. To the extent that we are aware of it as an object, we can use such pronominal words as 'this' or 'that' to verbalize our awareness.

[7] Bhartṛhari, Book I (*Brahma-kāṇḍa*), verses 123–4.

[8] For discussion of Bhartṛhari's system, see M. Biardeau, G. Shastri, and K. Kunjunni Raja (pp. 97–148), and Matilal [1990].

[9] For a fuller discussion of the theory implicit in this principle, see chap. 3.

Bhartṛhari's point here, of course, is that this verbalization or use of overt language is not just a cloak which our cognitive state picks up and puts on in order to be presentable to others. There is the implicit word or language which is present in our cognitive state as an inextricable part of it. Bhartṛhari claims that it is the very flesh and blood of the cognitive state.

This theory appears to be, in some sense, diametrically opposed to what the early Naiyāyikas were trying to say (see section 1.2). The early Nyāya says, as we may recall, that although our perceptual state (or, any cognitive state) is inextricably mixed with an implicit or overt word, our naming or identifying the object with a word is not an essential part of our perceptual act. At the very least, sense perception is to be differentiated from its verbalization. This point of the Nyāya school was enforced by the example of a child or a dumb person who cannot use overt language. But, for Bhartṛhari this counter-example is of no moment. A child may not use language overtly, but he is certainly not without implicit words, which 'Bhartṛhari claims' may be just the residual memory traces from a previous birth.[10] It seems to me that Bhartṛhari's point will still remain even if we discredit the hypothesis of previous births. As I have said earlier, a child may have an inborn linguistic competence by which he can be aware of the deep grammatical structures of language before he acquires aptitude for the surface structure.

It appears from the commentary (that is, the *Vṛtti*, which may or may not be by Bhartṛhari)[11] that Bhartṛhari would admit the possibility of a 'pure' sensation level where no distinct (*vyakta*) word seems to emerge. It is also conceded that this 'pure' sensation level can be somewhat cognitive in character. For example, a man running along a village path may have a tactile awareness of the grass or stones without verbalizing his sensations in any way. Even if this state is at all regarded as a cognitive state, it is useless for all practical purposes. For one thing, there cannot be any communication (or *vyavahāra*) of this state. Nor are we able to remember such a state later without the help of implicit words. If we are able to remember it at all in any form, we cannot say that it did not penetrate the 'implicit word' level. Moreover, the difference here is not between the presence and the absence of implicit words, but in fact between the emergence and non-emergence

[10] Bhartṛhari, *Kāṇḍa* I, verse 121.

[11] See K.A. Subramania Iyer, Introduction, pp. xvi–xxxvii; Matilal [1990].

of distinct (*vyakta*) words. Bhartṛhari would say that the 'word seed' is not awakened but lies latent in such cases, and this latent word when awakened is revealed by such pronouns as 'this' or 'that'.

Bhartṛhari's view on perception and its possible connection with speech differed significantly from that of Diṅnāga, who introduced a new trend in Buddhist idealism (see next section). But there is an interesting resemblance between Bhartṛhari and Diṅnāga regarding their notion of *kalpanā* or *vikalpa* (which one can translate as 'fictional or imaginative construction' or even 'objectification'). Incidentally, *vikalpa* was an important term in Indian philosophical circles, and a good number of eminent philosophers resorted to this term in some way or other in order to explain their philosophical positions.[12]

A fictional construction may be deliberate and conscious. It can also be unconscious and involuntary. When we tell a fairy tale we deliberately enter the land of fiction. But philosophically more interesting is the rather involuntary play of fiction in our experience. One may call it objectification, that is, our intellectual manipulation of 'the given' into a construct or a 'formed datum'. This is what I have called simply construction earlier and opposed it to datum or the 'given'.

A 'formed datum' is not identical with 'the given'. Yet, since it is not a deliberate construction of fiction but an essential factor of our cognitive process, we FEEL that it must refer to an object which is, in some sense, independent of this construction. But the question is not whether this feeling of ours is justified or not, but what could possibly be the nature of this 'independence' of the object referred to or 'the given'. For Bhartṛhari, it is the supreme Speech-reality, the one, imperishable, non-dual, absolute, the 'Substance'.[13] But in ordinary life, we are not concerned with this non-dual referent, but with the 'meaning' of our linguistic expressions. According to Bhartṛhari, the meaning of a linguistic expression is to be identified with the *vikalpa*, the constructed image which is assumed as external reality. One can easily discover an echo of Buddhist idealism here: External reality is nothing but modes of consciousness externalized.

The plane of construction should be distinguished from mental 'images' or ideas, which are just private properties of each individual. Conceptual construction is instead a public asset, a socially recognized fiction, which all of us, as language-users, share in common, though

[12] Compare *Yogasūtra*, *Samādhipāda*, sūtra 9.

[13] Bhartṛhari, Book III, chap. 2. This is the point, as I understand it, of the whole *Dravya-samuddeśa* (chap. 2).

we might not be aware of the fact. Thus, for Bhartṛhari, the plane of construction is neither a copy of external reality, nor is it even caused by such reality. In fact, it is related to nothing beyond itself. The plane of meaning does not constitute a separate world intervening between us and the objective world. The phenomenal world itself can be said to exist only insofar as it can be constructed as meanings of our conventional linguistic expressions.

We may note the following significant aspects of Bhartṛhari's theory: (1) Language and construction, verbalization and conceptualization, are actually indistinguishable from each other. (2) The meaning of a linguistic expression is to be found on the plane of construction. (3) Just as the Buddhist idealists say that a mode of consciousness imagines its object out of itself, Bhartṛhari says that language creates its own meaning. Words are as much indistinguishable from the concepts expressed by them as are modes of consciousness from the contents of consciousness. (4) There is one, absolute, supreme Reality, called *Śadba-brahman*, which underlies all forms and diversities, words and objects.

1.5. DIṄNĀGA'S THEORY OF PERFECTION

Although Diṅnāga belonged to the school of Buddhist idealism, he gave a complete reinterpretation to the older theories in such a way that it makes it difficult for us to call him an idealist without qualification. He wrote his *Ālambana-parīkṣā* in an unmistakably idealistic vein. But his logical and epistemological theories set forth in his greatest work, the *Pramāṇasamuccaya*, can be treated as belonging either to idealism or to realism.

Diṅnāga defines perception as a cognitive state which is totally untouched by imaginative construction (*vikalpa*, *kalpanā*) or conceptualization. He accepts the view implied by Bhartṛhari that conceptualization and verbalization, construction and language, are just two aspects of the same process. Construction, Diṅnāga says, is nothing but our associating any name, viz., a proper name or a class name or a quality-name or an action-name or a substance-name, with the datum.[14] In other words, it is an imposition of our constructed forms upon the 'given'.

In each case, our judgment (let us call it judgment instead of construction in this context) implies a possessive relation or a relation of

[14] See Hattori [1968], pp. 83–6.

qualification. Thus, from the popular point of view we can call the five types of names mentioned above the five designators, and very loosely, the five predicate-constructions. Diṅnāga calls them the five 'qualifiers' (*viśeṣaṇa*). In fact, the function of each name, each designator, according to Diṅnāga, is to qualify, and to qualify means to differentiate. Qualification and distinguishment or differentiation are, for Diṅnāga, just different names for the same function. This will be clear when we discuss Diṅnāga's 'differentiation' or 'elimination' (*apoha*) theory of meaning (next section).

Diṅnāga illustrates the five 'qualifiers' as follows: In the case of proper names such as *Ḍittha* the thing appears as qualified, or distinguished, by the name itself.[15] In the case of a class name such as *cow* the thing appears as qualified by a class concept, cow-ness. In the case of a quality name such as *white* it appears as qualified by a quality concept, white colour. In the case of an action name such as *cooks* or *a cook* (*pācaka*) the thing appears as qualified by an action concept, cooking. In the case of a 'substance-name' such as *a staff-bearer* (*daṇḍin*) or *horned* (*animal*) (*viṣāṇin*) the thing appears as qualified by a substance concept, a staff or horns.

A difficulty arises in the last two cases because these names are patently derivative words.[16] Thus, the meanings of their constituent elements are construed as qualifiers. Diṅnāga is careful to point out that according to some the 'qualifiers' are not such 'concrete' notions as a staff or horns and the action of cooking, but rather the abstract properties like the thing's relation to the staff or horns and the agent's relation to the action. One is reminded in this connection of Vyāḍi's theory of implied sense or the 'quality' aspect of meaning of such expressions.[17] It should be noted, however, that unlike Vyāḍi, Diṅnāga emphasizes the 'quality' aspect of meaning and hence focuses his attention upon the qualifiers or 'distinguishers' and avoids inclusion, in the domain of meaning, what is purported to be qualified or distinguished. Unlike the Universalists (for example, Vājapyāyana) he does not want to hypostatize the qualifiers, as we will see later.

Diṅnāga says that according to another view (and Diṅnāga probably agrees with this view; see Hattori, p. 85) all these qualifiers distinguish their objects by virtue of being mere names of them without intending

[15] Hattori [1968], pp. 85–6.
[16] Hattori [1968], p. 25, lines 29–34.
[17] See chap. 3 for a discussion of the views of Vyāḍi and Vājapyāyana.

to refer to real entities. In fact, the situation in the first case, viz., the case of proper names, is to be generalized to cover the rest so that no real entity is assumed as meant except these names or concepts.

A comparison between Diṅnāga and Praśastapāda (a junior contemporary of Diṅnāga) is in order here. Praśastapāda, the Vaiśeṣika philosopher, speaks also of a list of five qualifiers (*viśeṣaṇa*), which we can call 'predicables' with more confidence. Praśastapāda is concerned with our perceptual judgment and hence with predication rather than with designation. His examples, unlike those of Diṅnāga, have accordingly propositional structures:[18]

'*The earth (is) existent*'—predication of the most generic character.
'*The earth (is) a substance*'—predication of a specific class-property.
'*The cow (is) the possessor of horns*'—predication of the possession of a substance.
'*The cow (is) white*'—predication of a quality.
'*The cow (is) moving, or moves*'—predication of an action or motion.

We may note that all these predicables are derivable from the system of Vaiśeṣika categories developed by Kaṇāda. And as such all these predicables denote real entities. Since Praśastapāda was not concerned with designation, we do not find the mention of proper names in this list. Diṅnāga's list, on the other hand, begins with proper names. But the resemblance between Diṅnāga's designators and Praśastapāda's predicables is too obvious to be missed. For Diṅnāga, all these predicables could be treated as designators provided we do not hypostatize them into real entities but regard them as constructs.

We should note, however, one subtlety here of the Sanskrit philosophers. The last two, predication of a quality and an action, should be understood here as predication of the possession of a particular instance of a quality (a particular tint of white), or a particular instance of an action (a particular motion). 'This is a cow' is interpreted as predication of a universal property, cowhood; but 'This is white' is differently interpreted—as predicating a particular feature, a particular case of white in the locus. We may call the latter a 'property-particular'. A property-particular is, like an ordinary property, locatable in a locus; it can 'characterize' an object, a substance or a substratum. But, unlike ordinary properties, it is not shared, under ordinary circumstances, by other objects or substrata. The 'white' of the cow is different from the

[18] Praśastapāda, p. 459.

'white' of the calf, although both 'whites' would be loci of the universal property, whiteness.

Incidentally it should be noted that Patañjali's fourfold classification of words has nothing to do with Diṅnāga's list except that the word for proper name *yadṛcchā-śabda* 'arbitrary name' occurs in both.[19] Patañjali's classification is strictly a grammatical classification of words into proper names ('arbitrary' names), common nouns (conventional class names), adjectives, and verbs. Diṅnāga's classification is based on the nature of the qualifiers or distinguishers, that is, the concepts derivable from names. Thus, he mentions a quality name, an action name, and a substance name although grammatically all of them can be treated as adjectives.

All the qualifiers in Diṅnāga's list belong to what Diṅnāga calls the category of *sāmānya*, universal or generality. To call something a universal is, in Diṅnāga's system, to say that it is an imaginative creation, a conceptual construct, and it must be sharply distinguished from the given or the datum, which Diṅnāga calls the 'exclusive particular' (*svalakṣaṇa*). The given, in Diṅnāga's system, is always characterized by a uniqueness of its own, which is not repeatable and also not definable or expressible in language. Only the unrepeatable and unique particulars are reals, the universals are at best unreal superstructures and at worst fictional images.

Perception, that is, perception proper, according to Diṅnāga, is revelation of the pure given, the unique particular. It is untouched by construction and hence uncontaminated by any sort of speech or language whether implicit or explicit. Dharmakīrti gives a wider interpretation of construction (*kalpanā*) so as to include not only actual verbalization but also the latent capacity of infants and dumb persons to verbalize a cognitive state.[20] We have already noted that infants may possess concepts at the level of deep grammatical structures. Thus a child need not be considered to be without the constructive faculty, and his perception may be followed by a constructive judgment or imposition of forms[21] upon the data.

Śāntarakṣita and Kamalaśīla have interpreted Diṅnāga's notion of construction (*kalpanā*) in a slightly different manner. For them

[19] I differ from M. Hattori in this respect. See Hattori [1968], pp. 83–4.

[20] Dharmakīrti [*NB*], p. 47.

[21] A note for the Sanskritist: My use of 'form' here should not be regarded as a translation of the rather technical word *ākāra* in Sanskrit used in *Sākāra-vāda* and *Nirākāra-vāda*.

construction simply amounts to the association of a word or a name with the object (cf. *nāma-yojanā*). In other words, construction is just explicit or implicit verbalization, and not association of concepts, such as a class concept, with the object (that is, not *jātyādi-yojanā*) because it might imply objectivity or reality of class-concepts or universals, such as cow-hood. This interpretation was intended to answer some objections against Diṅnāga's explanation of construction. What Diṅnāga said might be construed to mean that there are two types of 'construction': One is adding of names, that is, verbalization, while the other is associating class concepts, etc., that is, conceptualization. Śāntarakṣita points out that the first type of construction is what is acceptable to a Buddhist while the second type is what a non-Buddhist tries to speak of. Diṅnāga mentions both although he would not admit that there is any essential difference between verbalization and conceptualization.[22]

Thus perception, being mere revelation of the given and entirely free from our subjective manipulation, is completely reliable and has an absolute truth-claim in Diṅnāga's system. The truth claim of other cognitive states is relative. The possibility of what we may call perceptual illusion does not apparently clash with this absolute truth claim of perception as far as Diṅnāga is concerned. Whenever the mind is at work conceptualizing there is room for error. But if no mental processes are at work, there can, *ipso facto*, be no possibility of error. Thus according to Diṅnāga's theory, to use the expression 'perceptual error' is to misuse the term 'perceptual' which is defined in such a way as to preclude error.

A problem arises in this theory with regard to the case of persistent illusions due to diseased or defective sense organs, viz., appearance of yellow to jaundiced eyes. Dharmakīrti has added another adjective, 'non-erroneous' (*abhrānta*), to Diṅnāga's definition of perception. But some followers of Diṅnāga have never been quite sure whether this qualification was necessary for Diṅnāga in order to exclude so-called GENUINELY perceptual errors. T. Stcherbatsky has argued that errors are always expressed in the form of a judgement and since the senses cannot judge, sense-perception cannot be wrong. Sense-perception is non-constructive and hence non-judgmental.[23]

One might add another point in favor of Diṅnāga's non-inclusion of the qualification 'non-erroneous' in his definition of perception. It

[22] Śāntarakṣita, pp. 368–70.

[23] Th. Stcherbatsky, *Buddhist Logic*, I, pp. 153–61.

is possible to explain away cases which Dharmakīrti and others regard as cases of perceptual error, for example the fact that a man with jaundice tends to see a white conch-shell as if it were yellow. The given or the uniquely particular datum, in this case the so-called error under consideration, is not just a white conch-shell, but rather an indefinite datum-complex, which includes as much the so-called white conch-shell datum as it does the disease of the eye organ. And as long as this perception is mere revelation of this datum-complex (which by definition should be unique to each situation) and free from constructive judgment, it is not wrong at all. But the resulting judgment would be wrong on two counts: (a) It is a construction and all constructions are wrong in some technical sense, and (b) it contradicts, or is inconsistent with, our previous or later knowledge that a conch-shell is always white.

1.6. WORD-MEANING AS 'EXCLUSION' (*APOHA*)

Nāgārjuna did not say anything specific about the nature of ultimate reality. According to Asaṅga and Vasubandhu, it is 'Consciousness only'. In Diṅnāga's system the place of ultimate reality is taken by the unique particulars (*svalakṣaṇa*). Each barest particular can be interpreted either as an internal consciousness-moment or an external point-instant depending upon whether a Yogācārin or a Sautrāntika is the interpreter.

Each particular is an absolute. It is self-sustained and self-destructive, being unique to each moment. This has been called the Buddhist doctrine of 'universal flux'. Stcherbatsky has called it the theory of 'instantaneous being' (*Buddhist Logic*, I, p. 79ff.). Dharmakīrti notes the following criteria for each particular: (a) it is productive of effects or it can function (*arthakriyā-samartha*); (b) it is unique or dissimilar; (c) it lies beyond the 'meaning' of words; and (d) it cannot be grasped by our verbalized cognition. If any of these criteria is not applicable to something, then that thing must be called a universal, an imaginative construct. Particulars, not universals, are real in the ultimate sense.[24]

Reality, that is, the particular, is supposedly inexpressible in language; our speech reveals the world of universals, the world of construction. These two worlds, the world of particulars and the world of universals, are, in this view, completely separated. This is, at least, one of the ways by which the Diṅnāga/Dharmakīrti view of ultimate reality

[24] Dharmakīrti [*PV*], II, verses 1–3.

can be interpreted. (Some, however, would beg to differ.) In support, these interpreters would refer to what Diṅnāga said in chapter 1 of his *Pramāṇa-samuccaya*: 'The sense-given datum (*indriya-gocara rūpam*) is self-aware (*sva-saṃvedyam*) and un-representable (*anirdeśyam*).' If this putative lack of representability means ineffability in language, then it fits well with the original Buddhist position that ultimate reality cannot be revealed by language. Diṅnāga's theory of language is expressed nicely by the famous epigram: 'Speech is born out of conceptual construction and conceptual construction is born out of speech.'

If reality is beyond speech and can only be perceived, our speech or words can never reveal or 'refer' to, reality. But Diṅnāga suggests that there is an indirect way by which words can refer to real particulars. He has developed an interesting theory of the meaning of names, which is known as the 'exclusion' or 'differentiation' (*apoha*) doctrine. This doctrine can be briefly summarized as follows: The function of a word or a name is the exclusion or elimination of other possibilities.

Before we discuss Diṅnāga's theory of names, I would like to remind the reader of Diṅnāga's list of five 'qualifiers' as five kinds of conceptual constructs. We should not overlook Diṅnāga's preference for proper names (which are mentioned first in his list). There is admittedly a philosophical view (notably of some Naiyāyikas) that even a genuine proper name, for example, a personal name like *Devadatta*, implies a 'universal concept' (*jāti* or *sāmānya*) as the qualifier of the thing named. Supposedly, 'Devadatta-ness' is the universal or common property underlying the ever-changing physical and mental states of the person called Devadatta. But this view apart, it is commonplace to regard a proper name as simply pointing to its bearer and implying nothing except that the bearer is qualified by that name. One can mention in this connection John Stuart Mill's contention that genuine proper names only denote and do not connote. In other words, proper names are only appellations (of Matilal [1982], chap. 3).

Diṅnāga's point is that the meaning of proper names cannot be hypostatized into a real entity. Proper names are 'devoid of implied senses' (*artha-śūnya*) and the 'qualifier' in the case of a proper name is just the name itself. And just as in the case of proper names we do not hypostatize the 'qualifier', so also in the case of other names we should not hypostatize the respective 'qualifiers'. To correlate this view with Diṅnāga's 'exclusion' theory of meaning, one has to say that it is not only in the case of a proper name that the 'qualifier' is the name itself but that also this name is to be understood not as a particular utterance,

but as the underlying form, a universal, which, according to Diṅnāga, is also a fictitious construction.

The point may be understood in this way. If a word or a name for a unique datum is just a noise or a sound event, it will be another sense-datum requiring another symbol or name to represent it. And so *ad infinitum.* To avoid this infinite regress we may regard words or names not as particulars but as repeatable universals. A nominalist would say words are the only universals we have.

The 'exclusion' theory of meaning entails many logical, epistemological, and metaphysical problems which we need not go into here.[25] The distinction between a conventional reality and the ultimate reality is very fundamental to Buddhism. The conventional reality is often called the 'concealing' (*samvṛti*) level and our speech operates at this level. All our practical behaviour can be reasonably accounted for, or explained, only at this level.[26] For Diṅnāga, the unique particulars are ultimately real. But the problem is whether we can refer to the unique particular as such in our language without resorting to concepts or universals.

Diṅnāga thinks that words or names cannot DIRECTLY designate the particular or datum. In order to refer to a unique particular, one has to use a word or a name, and to use a word or a name one has to use a concept as the 'ground for its application'. The MEANING of a word is the 'ground of application' (cf. Vājapyāyana, chapter 3), which is, according to Diṅnāga, a non-objectual fictional construction. The only way a name can identify, or refer to, a particular is through negation and elimination of other concepts.

Diṅnāga attacks a theory of names which was presumably propounded by the pre-Diṅnāga writers of the Nyāya school. (For a fuller discussion of the Nyāya theory of meaning, see Chapter 2, sections 5, 6.) Let us call this theory the 'name-tag' THEORY. I shall present here this 'denotation' theory more or less as a reconstruction of what Diṅnāga thought to be the theory of his opponent.

The name-tag theory states that a word denotes, that is, expresses, an individual, a thing. Apparently this might be interpreted as implying that a word is somewhat like a name-tag put upon a particular thing, so that whenever we utter the word it would be like pulling the tag and the particular thing would be presented (to our mind). This might

[25] See R. Hayes [1988].

[26] For further remarks on *saṃvṛti*, see chap. 5.

further imply that there should be one name, one tag, for each object. A particular difficulty will arise when we consider a general term or general name like *cow*. The name-tag theorist will have to say that it is a common name-tag for many individuals, and, to maintain consistency, he will have to add that the 'context' in which the term like *cow* appears determines which particular individual is being denoted. (The 'context' here includes any articles, or determiner, or the whole sentence, or, even broader contexts.) But sometimes the 'context' might be such that we have to say that not any particular cow but the general cow class is intended to be designated by the term *cow*. In such cases, it might be all right to say that *cow* denotes the whole cow class.

The above outline of the name-tag theory is admittedly vague and unclear. But Diṅnāga apparently criticized such a view. The clear version of the Nyāya theory of meaning seems to be post-Diṅnāga. It is to be noted that the name-tag theorist was not particularly interested in thinking that the 'quality' or the 'universal' might be the meaning of a general term.

Diṅnāga argues that a class name like *cow* cannot designate individual cows or cow-particulars because it seems impossible for a SINGLE name *cow* to express innumerable cow-particulars or individual cows. Diṅnāga calls this the problem of 'innumerableness' (*ānantya*) and notes it as a fault of the name-tag theory. The second fault of the name-tag theory noted by Diṅnāga is called 'deviation' (*vyabhicāra*). These arguments are based upon an implicit premise which we shall now examine.

Our learning of a name as expressing something and our use of that name or word to designate something must in some sense agree with each other. If the word x is learned as designating y, then x should be used to designate y and y only. As Uddyotakara has put it, if the word's relation to its meaning is not learned when we are learning that word, we cannot understand the meaning from the utterance of that word (1.17–18, p. 320). If *cow* is thought to be learned as expressing a cow-particular, it should be used to express the same particular all the time, because otherwise we will commit the fallacy of 'deviation'. In other words, the situation would be like this: we learn the word x as designating y and we use x to designate z and not y. Thus, Diṅnāga contends that we should rather conclude that *cow* expresses the class concept, the cow universal (which in its turn has a negative implication), and not the cow particular.

It is further argued that *cow*, or *the cow*, cannot help us to identify the individual through any specific characters. A particular cow always

has other specifications, viz., it must have a particular colour, a definite size, and so on. The word *cow* cannot tell us anything about these specifications. Hence, it is not proper to regard *cow* (or, *the cow*) as designating the cow particular.

Again, our metaphorical use of words cannot be justified unless we hold that the word designates 'quality' and not 'substance', that is, the particular. For example, when a servant behaves as the master, one can figuratively call him 'the master', and this use can be justified, provided we hold that *master*, or *the master*, designates master-concept and not a particular master.[27]

All these arguments of Diṅnāga are directed against the name-tag theory of meaning, upheld by the earlier Naiyāyikas and, perhaps, by Vyāḍi (before the Naiyāyikas). Sanskrit unfortunately has only one word *artha* which can ambiguously stand for 'meaning' of 'signification' or 'denotation' or 'connotation'. And also only one relation-word designate (*ucyate, vācaka*) is usually used to relate a word with its *artha*. Apparently the name-tag theorist before Diṅnāga argued that the 'meaning' (*artha*) of a name should be the denotatum, the thing or the particular. This view may work very well until and unless we consider the 'meaning' of a word in the context of what B. Russell has called PROPOSITIONAL ATTITUDES.[28] When I say 'Bring me a horse', I am asking not for the horse-concept but a particular horse. For Diṅnāga, 'perceives' does not imply a propositional attitude and hence the object of perception is the unique particular. But 'perceives that' implies a propositional attitude and hence for Diṅnāga it does not express true perception but a conceptual construction.

The upshot of Diṅnāga's arguments is that the meaning of an expression is never the object or the particular, and hence the name-tag theorists view is mistaken. Meanings are different sorts of objects. A particular, for example, a fire-particular, is produced and destroyed and it cooks or burns our food, but the meaning of fire is never produced or destroyed, nor does it burn or cook our food. Meanings, for Diṅnāga, are fictional constructions and they have a negative function to perform which we shall see presently.

A real entity x exists by itself and only as an indirect consequence of this fact of existence can we say that it is never otherwise, that is, it is never not-x. A fiction, or a fictitious entity, on the other hand, does

[27] My exposition of Diṅnāga's arguments is based on the fragments cited by Uddyotakara. See Uddyotakara, pp. 323–32.

[28] Russell [1940], chap. 12.

not exist by itself but is assumed as real by our language or speech for the purpose of discourse only, and its sole function is to reject or exclude association of other fictions, other concepts. We may not be able to ride a 'unicorn' but its meaning, the unicorn-concept, rejects association with other concepts, such as dragon-concept or even horse-concept.

But the referring activity is an important function of our discourse, even though the name-tag theorists might have held mistaken notions about it. Thus the question arises: How does a word serve the purpose of referring to a particular? In the context of perception the question may be rephrased as: in what way does a construction refer to a datum. Diṅnāga answers that it is through 'negation' or 'elimination' or 'differentiation' (*apoha*). A word expresses a concept and a concept being a fiction cannot POSITIVELY qualify or characterize the particular (as a Nyāya realist believes), but it can NEGATIVELY disqualify the particular from being claimed by other fictions or concepts. Since all concepts are fictions, a particular has equal claim to be associated with just any one of them. But in our construction or naming activity, we reject or exclude association with all other concepts except the concept expressed by the name. Thus, construction and verbalization are to be understood as 'exclusion' of all rival claims. If we associate the name *cow* or, *the cow*, with a particular, it MEANS that it is not what we cannot call a cow.

Each name, as Diṅnāga understands it, dichotomizes the universe into two: those to which it can be applied and those to which it cannot be applied. The function of a name is to EXCLUDE the object from the class of those objects to which it cannot be applied. One might say that the function of a name is to LOCATE the object outside the class of those to which it cannot be applied. There is one advantage in taking a negative approach and using the term 'exclude' rather than using a positive expression such as 'locate'. 'Exclusion' by itself does not imply 'inclusion'. Denial or negation does not always mean affirmation of the contradictory.[29] Exclusion, in the context of the premise that there are mutually exclusive classes which taken together exhaust the whole universe of discourse, might imply 'inclusion'. For example, if we exclude something, some particular, from class *A*, it must be included in some other class such as class *B* or *C*, provided we assume that classes *A*, *B*, *C*, . . . exhaust the universe of discourse. (Cf. 'exclusion' negation in chap. 5, section 5.6.)

[29] For further remarks on negation, see chap. 5, section 5.6.

Since all class concepts are fictional, if we DENY the claim of a particular to be associated with some class concepts we thereby do not commit ourselves to the admission of its claim to be associated with another class concept. It may be harmless to say that a particular is associated with a fictional class concept as long as we do not derive from it the illegitimate conclusion that such a class concept is, therefore, defined to be a POSITIVE property, and hence it becomes a REAL property of that particular. Diṅnāga and his followers think that the negative approach (which they have proposed and which I have tried to outline above) forestalls such a unwelcome implication. It would be unwelcome because NOMINALISM would have to concede REALISM.

Various other aspects of Diṅnāga's 'exclusion' theory of meaning were developed by his later followers, but they need not concern us here. There are the extreme Negativists, for example, Prajñākara,[30] who think that names cannot have any positive function like 'locating' or 'referring to' the object, that is, the particular. There are also the milder Negativists, for example, Karṇakagomin and Ratnakīrti,[31] who acknowledge that the so-called positive function is so prominently experienced when we learn the meaning of the word through ostensive definition that it cannot be totally denied.

1.7. DIṄNĀGA AND MODERN REDUCTIONISM

All the issues discussed here are not merely museum pieces for the modern philosophers. The questions of perception and meaning, sense-data and appearance, material objects, and momentary events, were quite current at least until a few decades ago. Even today philosophers worry about meanings and intentions, about objects of propositional attitudes and other theoretical abstracts. It might be interesting to connect Diṅnāga's doctrines to matters of present day relevance.

Sense-data philosophers in the West (and their history too seems to go back to a much earlier period) have maintained that we never DIRECTLY perceive material objects, but only sense-data or sense qualities, or even our ideas. Bishop Berkeley immediately comes to mind, but there have been many other philosophers in this century in the West who held similar views.

Let me emphasize the well-known point that the fundamental question in almost every philosophical system, whether Eastern or Western,

[30] Prajñākara, pp. 262–6.

[31] Karṇakagomin, pp. 248–54; Ratnakīrti, p. 60.

centres around the nature of reality, or, to use a modern expression, the discussion 'on what there is'. The attempt of critical philosophers, both in India and in the West, has gradually taken the form of showing that certain categories of objects, which are assumed to be there by the vocabulary of our common language, are really not there. In other words, certain alleged objects are regarded as dispensable in favour of certain less problematic objects. Thus, abstract universals are said to be dispensable in favour of 'concrete' things; 'concrete' material bodies are found less satisfactory than the immediate sense properties.

An effective way of arguing in favour of certain types of objects to the exclusion of certain other types is to supply a set of rules for replacing statements about one type by statements about the other type. This is what has been called reductive analysis or 'radical reductionism' in the West. Reductionism, in one form or another, has been foreshadowed in the writings of many earlier philosophers, though it is only in this century that it has been carried out with zeal and conviction by several empiricists.

Among the early forms of reductionism in the Indian context, we may mention the Buddhist posit of *dharma* (sense properties, etc.) in place of the proto-Vaiśeṣika substance or physical bodies, the Buddhist notion of five 'aggregates' in place of the Brahmanical idea of a soul, the Buddhist doctrine of *apoha* to replace the Nyāya doctrine of universals, and the Navya-nyāya doctrine of 'imposed property' (*upādhi*) to take the place of the problematic *jāti* (generic property). Early British empiricists like Locke and Hume also believed in the principle of reductionism. Modern logical empiricists like R. Carnap, by using, with great ingenuity, the symbolism of mathematical logic, have actually carried out to a considerable extent the scheme of translating statements about the physical world into statements about immediate experience. But, at the present moment, this type of radical procedure is no longer in vogue, and a logician of the stature of W.V. Quine has called it one of the 'two dogmas of empiricism'.[32]

Whatever may be the fate of reductionism today, it is always philosophically profitable to compare two rival conceptual schemes such as a phenomenalistic one and a physicalistic one. The latter posits physical objects and believes that all statements about subjective events of sensation and reflection are reducible into statements about physical occurrences. It will be of no use to produce a counterexample because

[32] Quine [1961], Essay II.

the physicalist is convinced (on *a priori* grounds) that the counterexample can be explained away. The physicalist accepts physical objects and claims that this acceptance simplifies our account of experience by unifying thousands of scattered sense-events into one single object. Extending the same line of argument, the Vaiśeṣika can say that he posits the notion of self to unify our 'inner' events. In recent philosophical discussion, the concept of personal identity has, in some circles, occupied the centre stage. There are those who are inclined to reduce the concept of a 'person' to physical and psychological properties. This is not exactly the old Humean bundle theory but a more sophisticated account along similar lines. Buddhological scholars have hailed this new development for its obvious similarity with the non-soul doctrine of the Buddhist. However, we must note an important difference, which is often forgotten. Modern reductionists who reject the notion of a self or a person are not phenomenalists but, in some form, physicalists, for they accept the physical substances or bodies. It should be noted that this goes against the grain of Buddhism, which rejects both the notion of a unified substratum of experience, and that of a unified subject. From the phenomenalistic point of view, however, the scheme of physical objects is at best a convenient myth. Much in the same way, the Diṅnāga school regards the Nyāya-Vaiśeṣika posit of middle-sized bodies as a convenient fiction.

There is, however, an important difference in the methodology of the Diṅnāga school. A follower of Diṅnāga has to convince himself that the bare particulars are unique point-instants and always in a flux, and thus are beyond the reach of language, much in the same way as some logical positivists (for example, Otto Neurath) asserted at some point that the 'given' can never be spoken of, that we can never expect to compare reality with proposition, and that we always remain within 'the sphere of linguistic thought'.[33] If this conviction is held on *a priori* grounds, a follower of Diṅnāga will not have recourse to any reductionism and *Protokollsätze* since this would be a useless endeavour. Reality stands in its own glory and is directly connected with our perceptual mode of consciousness where no speech intervenes. Our only hope to approach it by language is by the process of 'exclusion and negation' outlined above. This is so because our language is a common means of communication among people. It is one of the limitations of such a common property that we cannot, in practice, construct a PURE

[33] Neurath, p. 291. (English translation in the anthology *Logical Positivism.*)

name for a 'pure' momentary particular and hope to communicate it to others so that they will understand the name (and its reference) without recourse to some concept or generality.

The thesis of phenomenalism as well as the arguments of the sense-data philosophers have been criticized from various points of view.[34] Modern logical empiricists seem to have more confidence in the middle-sized middle-distanced objects since they are our 'conceptual firsts'. It is now widely felt that sense-data, even when they are admitted as sense-qualities and hence more or less physical occurrences, are not sufficient to replace totally the class of physical objects. Besides, it can be shown that we do not need sensory data to account for our knowledge or discourse of physical objects themselves. Our confidence in the physical objects is, in fact, strengthened by the consideration that terms for such objects are at the focus of our most successful communication. The Nyāya-Vaiśeṣika and the Mimāṃsaka philosophers of the post-Diṅnāga period reformed, to a great extent, their earlier systems of epistemological realism while they tried to absorb the shock of the idealist's attack. We shall review the position of these philosophers in the next chapter.

[34] See R. Chisholm, and J.L. Austin.

2

Individuals, Universals, and Perception

CHRONOLOGICAL NOTE. Praśastapāda was a contemporary of Diṅnāga. It is conceivable that Praśastapāda wrote his *Padārthadharmasaṃgraha* after he had seen Diṅnāga's logical work. Uddyotakara was an important exponent of the Nyāya school. He defended the Nyāya position against the attack of Diṅnāga. Kumārila belonged to the Mīmāṃsā school. He severely criticized Diṅnāga's epistemology and *apoha* doctrine. He propounded a philosophical position which we may term 'realism', in which universals are accepted as reals.

The relative chronology of two well-known Naiyāyikas, Vācaspati and Jayanta, is still a matter of controversy (see Matilal 1977). Śrīdhara wrote his commentary, *Nyāyakandalī*, on Praśastapāda's work. Śrīdhara must have preceded Udayana and the date of Śrīdhara's work is more or less fixed (AD 991). See D.C. Bhattacharya, p. 8.

Udayana lived in the eleventh century AD and infused new life in the philosophical activity of the Nyāya-Vaiśeṣika school. The 'new school', *Navya-nyāya*, might be said to have started with Udayana although Gaṅgeśa wrote his epoch-making work, *Tattvacintāmaṇi*, several centuries later (*c.* fourteenth century AD).

2.1. A CRITIQUE OF THE DIṄNĀGA SCHOOL

Diṅnāga's philosophical views had far-reaching effects in the field of epistemology and logic. Nāgārjuna's criticism of all systems and all views of reality might not often be taken seriously by other philosophers. The doctrine of emptiness may be easily misunderstood and brushed aside without any serious consideration. Nāgārjuna can be called a *vaitaṇḍika*, an arguer who argues for the sake of argument only, one whose sole concern is the destruction of the opponent's view and who does not offer any view of his own nor tries to defend any view.

Thus, a confrontation with Nāgārjuna's critique could be easily, though unfairly, avoided. But Diṅnāga constructed an independent system of his own, which presented a challenge to all rival philosophers. He criticized the views of other philosophers and tried to establish his own view so much according to 'the rules of the game' that it was impossible to ignore his challenge. In this chapter we shall try to see how the Nyāya-Vaiśeṣika philosophers and some Mīmāṃsā philosophers tried to reformulate their earlier views and thereby defend what I call their 'epistemological realism'.

According to certain interpretations, even Diṅnāga can be called a 'realist' (and no doubt an 'empiricist'), provided that unique particulars are regarded as external point-instants. I think the Diṅnāga school betrays, in some essential respects, a PHENOMENALISTIC attitude and a NOMINALISTIC attitude as well. In the same vein of generalizations, one may say that the Nyāya-Vaiśeṣika school is characterized by the PHYSICIALISTIC tinge and to some extent by Platonic realism. But both Diṅnāga and anti-Diṅnāga schools used a philosophical method which was empirical and analytical.

The interesting points of the Diṅnāga school can be summed up as follows: (1) Only unique particulars exist (that is, are real) and they are in perpetual flux (that is, are momentary). (2) So-called material bodies are to be analysed into sense-properties (there being no substratum for these properties), and sense-properties are, in their turn, to be compressed into either external point-instants or internal consciousness moments. (3) All things except the unique particulars are regarded as *sāmānya* 'common-ness' or 'universal', and as such they are all 'concepts', that is, objects of imagination, and hence not real (that is, they do not exist). (4) Only perception, that is, non-constructive cognition, reveals the particulars, and hence is reliable, but all other cognitive states including perceptual judgments and inferences deal with 'concepts' and cannot reveal or grasp real particulars. The truth of a constructive cognitive or judgment is only relative. Consistency or 'non-contradiction' (*avisamvādakatva*, cf. Dharmottara, p. 17) is the test of truth of a cognitive state. (5) Words or speech cannot reveal the real momentary particulars. The very fact of our learning a word to denote an object destroys the name-tag theory. When a word becomes a usable symbol in a natural language, or the name-tag it becomes a symbol for the concept and not for the fleeting, ever fluctuating particulars.

As against these views, the Nyāya-Vaiśeṣika philosophers (as well as Kumārila, to some extent) held the following views: (1) Not every-

thing is in perpetual flux because there are some STABLE objects. 'Uniqueness' and 'commonness' are just two aspects of the real object which we may call the individual (cf. *tad-vān* of Uddyotakara and Jayanta). (2) Material bodies exist as the real substrata of their properties and the so-called sense-properties are not very different from the properties of material bodies. (3) Universals, at least some universals, are real in the sense that they are external to our consciousness and independent of our imaginative construction. (4) Perception in the form of judgment and other judgmental cognitive states are as much reliable as in non-constructive perception. The test of truth is the agreement of the content of our cognitive states with reality. The structure of the world is reflected in the structure of our true cognition. (5) A word can DENOTE an object, an individual, and, at the same time, 'imply' a concept or universal.

My attempt here will be to recount some of the arguments offered in defence of the second group of views. Materials will be drawn mainly from various texts of the Nyāya-Vaiśeṣika and the Mīmāṃsā schools of the post-Diṅnāga period. And I shall try to connect the arguments presented with individual philosophers wherever necessary.

2.2. MATERIAL BODIES AND THEIR ATOMIC CONSTITUENTS

A common view, which is often labelled as Naïve Realism in the West, holds that we directly perceive physical objects, material bodies, which are 'out there' and that visual or tactual sense-properties BELONG TO, or RESIDE IN, these material bodies. This view is often rejected. It is pointed out that we never perceive a material body as a 'whole'. The Buddhist would argue that if our sense-organ can be said to be in direct contact with anything at all, it should be held as being in direct contact with only 'parts' or 'constituents'. Thus, what we call perception of a material body (say, a chair) is really a construction or mental synthesis or even an 'inference' (*anumāna*).[1] Doubts as to whether our perception of a tree (viz., a material body) should be really called perception were raised as early as the *Nyāyasūtra* 2.1.30–2, and the problem was discussed and succinctly answered.

If material bodies or 'wholes' cannot be established as our 'perceptual firsts', their claim to independent reality dwindles. The opponent argues that we can never perceive a material body as a 'whole', viz.,

[1] For an extended sense of 'inference' (*anumāna*) used by the Indian philosophers, see D.N. Shastri, pp. 62–4.

a tree, but we simply construct or even imagine it from the data or objects of our direct acquaintance. One can counter this by saying that perception of a 'part' or a constituent of the 'whole' material body will only make sense if we concede perception of the whole body, because the notion of 'part' will be meaningless without the notion of 'whole'. That we do not see the other side of the moon from a particular position does not mean that we do not see the moon at all. Perception of a tree entails perception of a part of it, but not vice versa.

It is true that sometimes only a part of a material body, say a cow or a tree, is visible to our eyes (the rest being hidden) and from that we go on to 'infer' (or, construct) that what we see is a cow (or a tree, as the case may be) standing there. But this does not contradict the position that there are other times when we perceive the 'whole' directly, that is, we 'receive' (*grahaṇa*) or take, quite unhesitatingly, the object of our perception to be a cow (or a tree). Thus, if perception of a part is a fact, perception of the 'whole' is also a fact.

It is not simply a question of our confusion (as the Buddhist would claim it to be) over where perception ends and inference or 'construction' begins, but it is also a question of what we understand precisely by 'perception' and by 'inference'. The sense-organ, for example, can be said to be in contact as much with the 'whole' material body as it presumably is with a part of it. If this contact is understood to be a physical 'conjunction' (*saṃyoga*), certain interesting philosophical questions arise. The Nyāya discussion of these questions will be reviewed shortly.[2]

The Buddhist idealist (for example, Vasubandhu) has argued that we do not, or cannot perceive even part of the tree, nor even part of its outer surface, because this division into parts and further parts can go on without end and there will always be left some parts which we do not see. This forces us to conclude that whatever we see cannot be a PART of any external matter.[3]

Uddyotakara answers that this argument is based upon a misconception of what perception is and how it differs from an inferential judgment. The tree, that is, the 'whole', as an object of perception is completely different from what we call 'parts' of the tree. Thus, from the proposition 'Rāma perceives part of the tree', it does not necessarily follow that Rāma perceives the tree, nor does it follow that Rāma

[2] On 'whole' and 'part', see also H.N. Randle, pp. 85–93.

[3] For similar arguments, see Vasubandhu, verses 12-15 (of *Viṃśatikā*).

does not perceive the tree. But, from 'Rāma perceives the tree' it may follow (excluding the cases of hallucination) that Rāma perceives part of the tree. To say that, the perception of the 'whole' entails perception of a part is a CAUSAL argument. But this is denied in Nyāya, as it stands or as it is understood by the Causal Theory or the old Representationalist. The parts or constituent atoms are, according to Nyāya, causally prior to the 'whole' body, but our perception of the 'whole' may be causally prior to our perception of its parts. If *perception* of the part were invariably causally prior to the perception of the whole tree, then there would have been some qualification for claiming such perceptions to be 'inferences'. But if parts or atomic constituents only are held to be *causally* prior to the whole, and the perception of the parts is not so, then this claim loses its point. It may be called a 'logical' priority, for perception of the whole implies such a sensory connection, although this connection may be simply, on the Nyāya-Vaiśeṣika view, a purely physical-physiological event, and not necessarily cognitive in character.

It is an unfair question, says Uddyotakara, to ask whether the 'whole' tree resides in the perceived parts partially (*ekadeśena*) or wholly (*kṛtsnena*). The tree is one WHOLE which stands in its own right. It should not be conceived as a cluster of parts. A cluster of parts is comparable to a heap of apples. It is in order when we say that a heap of apples exists partially on the floor and partially on the carpet, because we only mean thereby that some of these apples (forming the heap) are on the floor while some other are on the adjoining carpet. And it is again in order when we say that the heap of apples exists WHOLLY in the basket. But, with respect to the WHOLE tree and its so-called PARTS, such dialectical questions will be pointless because the supposed answers will be either humorously tautologous or simply meaningless. For, are we to construe the answer as (1) 'some of the PARTS forming the whole occur in some parts of the whole' or (2) 'some of the ONE whole occur in some parts'?

The Buddhist opponent continues: If the WHOLE body exists neither PARTIALLY nor even WHOLLY in the perceived parts, why and how else then will the 'whole' be said to be present in the perceived parts? Uddyotakara replies that this, again, is an unfair question since it arises from a misconception of what may be called the 'grammar' of the verb *to occur in* (*vṛtti* or *vartate* in Sanskrit). There is nothing unusual in our saying that the 'whole' tree, as ONE object, occurs in many parts, and this will imply that it occurs in the perceived parts too. But error

creeps in when we ask: Do the perceived parts present the 'whole' tree COMPLETELY OF INCOMPLETELY? The question of completeness and incompleteness in this connection presupposes wrongly the divisibility of the one 'whole' tree. A tree, as a 'whole' body, can be destroyed or torn apart, but it is not divisible in the way a group of students can be divided into several sections. We may say that the stuff of the tree is divisible, but not the tree itself. Therefore, the proper answer to the above question will be: the perceived parts may present the 'whole' tree, period. Uddyotakara compares the notion of the 'whole' body with the notion of numbers. The number *two*, for example, is present in two apples. From this we may say that the number *two* is presented by either of the two apples when accompanied by the other. But it is senseless to ask whether either or each of them presents the number *two* completely or incompletely.[4]

2.3. 'INSEPARABLE' RELATION (*SAMAVĀYA*)

A 'whole' or a material body is not just an integration of parts or constituent atoms. The material parts or atoms combine themselves to produce a different entity, a separate reality, which we call the 'whole'. The material parts themselves are in conjunction with each other (*saṃyoga*), which is a separable relation. But the whole body, the product, inheres in its parts, and this inherence is an *inseparable* relation. Thus, a proper understanding of what is meant by this 'inseparable' relation and how it is contrasted with the separable relation is in order.[5]

Two bodies, or two entities in general, may be in a 'conjunction' relation with each other, and this relation is 'separable' in the sense that the two entities do not depend upon this conjunction for their existence. They are, or can be, 'separately existent' (*yuta-siddha*). But inherence is 'inseparable' in the sense that the very existence of that which is inherent (*samaveta*) depends upon this relation. In other words, one of the relata cannot exist separately without this relation of inherence because it is an essential condition for its existence. If the relatum, that is, the inherent entity, is a non-permanent object, that is, a 'product' (*kārya*), which can be produced, then inherence becomes in some sense a 'causal' relation. The other relatum, where the 'product' entity inheres, becomes the causal substrate of the produced entity. Thus, a

[4] See Uddyotakara under *Nyāyasūtra* 2.1.32 as well as 4.2.7, pp. 213–16 and 503.

[5] See also Matilal [1968], pp. 37–40.

material body is produced by its material parts and becomes a different entity, which has as its causal substrate these material parts. If the inherent entity is a 'non-product', that is, a permanent object (for example, a generic property like 'cowness', see next section), then inseparability means that the substratum can never exist without the other relatum.

In this way, the Nyāya has tried to answer the Buddhist objection against the concept of WHOLE based upon the impenetrability (*sapratighatva*) of matter. It is contended that impenetrability is a necessary attribute of matter. This implies that the space occupied by one material object cannot be occupied by another. Now, if the material body (say, the chair) is different from its material parts, how can the same space be occupied by different impenetrable material objects? The Buddhist concludes, therefore, that the material body is indistinguishable from its parts, and these parts from their parts, and so on. Thus, the existence of a material body is reduced to a myth, a mere subjective construction.

The Nyāya tries to get around this difficulty by its doctrine of inherence, the 'inseparable' relation.[6] If *a* inheres in *b* in the sense that *a* cannot exist without occurring or residing in *b* then *b* may be allowed to occupy the same space. In other words, Nyāya accepts the IMPENETRABILITY principle of the Buddhist but adds a further principle, which we may call the principle of NESTING. 'Nesting' is said to counteract the impenetrability principle. We may roughly distinguish the two positions as follows.

The Buddhist position is: If *a* and *b* are two different entities then *b* cannot occupy the space occupied by *a*. This is just a generalization of the empirically verifiable principle: two material bodies of the same sort, two bricks for example, cannot occupy the same space together.

[6] See D.N. Shastri for a good review of the traditional arguments of the Nyāya school in defence of the 'whole' (*avayavin*), pp. 249–71. I have given here a defence of the Nyāya position using what D.N. Shastri calls 'the later view' of the Nyāya school. Incidentally, I am not sure, as Mr Shastri apparently is, about the fact that the three-fold division of cause into the 'inherent', the 'non-inherent', and the efficient, belongs to the later view. See D.N. Shastri, pp. 265–71. The idea of causal substrate as the 'inherent' cause is found in *Vaiśeṣika-sūtra* 1.1.14. That quality (*guṇa*) and motion (*karma*) can be causal conditions (that is, the 'non-inherent' causes) is mentioned in *Vaiśeṣika-sūtras* 1.1.25–6. And that a causal condition may be destroyed after the effect is produced (and this resembles the efficient cause) is also found in *Vaiśeṣika-sūtra* 1.1.19. Praśastapāda also mentions the 'non-inherent' (*asamavāyin*) and the 'efficient' (*nimita*) causes; see Praśastapāda, pp. 244, 246.

The *Nyāya* position is: If *a* and *b* are two different entities then *a* cannot occupy, at a given time, the same space occupied by *b*, provided one is not nested in, or, does not nest, the other.

Let us attempt a rough characterization of the notion of NESTING in this context. A material body *a* is nested in *b* if and only if *a*'s movement necessarily implies *b*'s movement. Since the part of a body cannot but move when the body, the 'whole', moves, we can say that the body is NESTED in the part. Thus, the body, the 'whole', can very well occupy the space occupied by its part. When, however, two bodies are JOINED together (that is, are in conjunction with each other), the movement of one will invariably cause movement in the other. But, it is quite possible (at least, prior to their conjunction, or, when their conjunction is destroyed) that one will move while the other will not. In the case of the 'whole' and the part, on the other hand, it is impossible under any circumstances that the 'whole' will move and the part will not.[7] (We shall be concerned with a somewhat different characterization of the notion of NESTING later.)

Another argument (which has been discussed through the ages among the Indian philosophers) to prove that the material body is not a separate entity but a mere aggregate of parts may sound quite silly to a modern mind. But I want to mention this argument briefly here simply because it will help to understand a very interesting point of the Nyāya-Vaiśeṣika logicians. This point was implicitly mentioned by the early Nyāya-Vaiśeṣika and developed by Navya-nyāya to a great extent.

The Buddhist argument referred to in the last paragraph is nicknamed the argument of 'variegated colour' (*citra-rūpa*). The argument is based upon an implicit principle which was apparently admitted by the early *Vaiśeṣika* school. The principle is: on qualities like colour have what is called 'pervasive occurrence' (*vyāpya-vṛttiva*) in the object qualified. Thus, Praśastapāda divides qualities into those that pervade their substrata and those that do not (cf. *āśrayavyāpin* and *pradeśa-vṛtti*). With respect to time also, a similar division operates. Some qualities exist as long as their substrata exist (cf. *yāvad-dravya-bhāvin*), and some qualities do not exist as long as their substrata exist.[8] It is argued that if a material body, viz., a cloth, which is made of threads of various colours, is regarded as a separate entity, a separate substance,

[7] Compare with Praśastapāda's idea of *yutasiddhi*; see Praśastapāda, p. 360.
[8] Praśastapāda, pp. 247–9.

it will have many colours. But this violates the principle upheld by Praśastapāda. Thus, the Buddhist points out, an integrated whole, for example, a cloth, cannot be a separate reality but only an aggregate of parts, threads, each of which has its own colour.

It seems strange that for many centuries the Naiyāyikas were quite confused by this rather sophistical argument of the Buddhists. Some Naiyāyikas tried to assert the peculiar theory that the combination (but not actual mixture) of different colours should constitute a separate colour, which is to be possessed by the integrated 'whole', the cloth. Dharmakīrti justly ridiculed such a theory.[9]

Navya-nyāya suggested a better way to answer this sophistical argument. What is required is a reformulation of the above principle of the Vaiśeṣikas with more precision. Colour, by itself (and not just any particular colour such as red or blue) has 'pervasive occurrence' in its substratum. Thus, from the proposition 'the substance x has colour' it does not follow that x has just one colour all over, both in and out, although it should follow from the same proposition (in view of the Vaiśeṣika principle mentioned above) that x has colour all over, both in and out. A material body generally has a particular colour at a particular time. But it is quite possible for a particular colour to occur in the object NON-PERVASIVELY. That is, a particular colour may characterize only one part of the body while another colour may characterize another part, and in that case the 'whole' body will have many colours. But, in any case there will be colour all over the body all the same, both in and out.[10]

The notion of 'non-pervasive' occurrence can be traced back to Praśastapāda. But in Navya-nyāya this notion was extended to cover abstract properties.[11] Connected with this was the important notion of 'delimitor' or 'limitor' (*avacchedaka*). With the help of these notions Navya-nyāya logicians tried to solve many puzzles which were posed by the Buddhist logicians through their over-emphasis on the law of contradiction. (For example, how can a seed be 'non-productive' of the sprout at time t_1, and productive of it at time t_2.)

[9] See Dharmakīrti (*Pramāṇavārttika*) [*PV*], II, verse 200, p. 281.

[10] Raghunātha (*Padārthatattvanirūpaṇa*), p. 33. See also Matilal [1968], pp. 138–40, and D.N. Shastri, pp. 256–8. Here, as in some other places also, Mr Shastri has not been quite fair with his exposition of the *Navya-nyāya* view.

[11] Ingalls uses the term 'incomplete occurrence' for *avyāpya-vṛtti*, and C. Goekoop has followed Ingalls in this respect. See Ingalls, pp. 73–4 and C. Goekoop, pp. 8–10.

2.4. THE LAW OF CONTRADICTION AND THE 'DELIMITORS'

The Buddhist law of contradiction can be formulated as follows: a property p and its absence cannot be asserted of the same object x under any circumstances. This principle is well suited to Diṅnāga's doctrine of 'unique particular' (*svalakṣaṇa*) as reals and the Buddhist theory of the momentariness of everything.

The Nyāya also maintains the law of contradiction as a fundamental principle and thus rejects Kumārila's view that the relation between 'quality' (*guṇa*) and 'substance' (*dravya*) is identity-cum-difference (*bhedābheda*).[12] The Nyāya formulation of the law of contradiction would be: a property p and its absence cannot be asserted of the same object x at the same time, in the same sense. Note that the qualification 'at the same time' would be redundant under the Buddhist theory of momentariness. More generally, we may state the Nyāya formulation of the law of contradiction as follows: a property p and its absence cannot be asserted of the same object x with respect to the same 'delimitor'. The delimitors of x, or rather, the delimitors of x's being the substratum, are generally the temporal segments of x's duration time, the spatial segments of x (that is, parts of x when x is a material body), and any other constituent properties of x (such as white colour and cowhood when x is a white cow). Thus, with suitable change of delimitors, the same object x can be said to be characterized by contradictory properties like p and the absence of p.

For example, the same tree may be said to be in conjunction (*saṃyoga*) with a monkey and not in conjunction with the same monkey, provided we specify the limitors of the substratum, the tree. Here the limitors are the spatial parts of the tree, and they DELIMIT what we may call the 'scope' of the substratum where those properties are said to occur. Similarly, we can say that the same mango is green at a time and yellow at another time without saying that they are two different mangoes (as the Buddhist would have us say in order to prove the thesis of momentariness), provided we delimit the 'scope' of the substratum by two different temporal segments. Thus, Gaṅgeśa has argued that while it is the same pot which is dark in colour when it is unbaked but red when baked, we can maintain that the following two propositions are true:[13]

[12] See Gaṅgeśa, Vol. I, pp. 659–61.
[13] Gaṅgeśa, Vol. I, p. 660.

1. The pot x is different from the dark pot with respect to its 'delimitor', red colour.
2. The same pot x is identical with the dark pot with respect to its 'delimitor', dark colour.

The notion of 'non-pervasive occurrence' has thus necessitated the introduction of the notion of 'delimitors' in the Navya-nyāya system. A possible definition of 'non-pervasive occurrence' is: the property p is occurrent non-pervasively in x if and only if the absence of p is also occurrent in x. This may appear as a glaring example of violation of the law of contradiction, but is not necessarily so. With the introduction of different 'delimitors' of the 'scope' of the substratum (sometimes mentioned also as the 'scope' of occurrence) the law of contradiction can be maintained.

Terms like 'delimitor', 'substratum', and 'property' are used in Navya-nyāya in a sense which is ontologically neutral. A delimitor may be an imposed condition, or an imagined property, or an imagined division of time, or of space, or a real property. In the same way substratum and property (also qualifier and qualificand) are ontologically neutral. A real feature like blue colour or a generic property (a REAL universal, see next section) like cowness can be a delimitor, but not all delimitors are real properties in this way. Thus, by using these terms Navya-nyāya philosophers have been able to describe their philosophy of logic without being extravagant in their commitment to ontology.

One may also note that Diṅnāga's unique and momentary particular may be treated in Navya-nyāya as the object delimited by a temporal point, a moment, and sometimes delimited also by a spatial point (if we accept the Sautrāntika standpoint). Thus, the cow-particular (*go-svalakṣaṇa*), which, according to Diṅnāga, is our 'perceptual first' and which alone is real, can be treated in Navya-nyāya as 'the cow-stage' delimited by the moment of perception. (On 'delimitors', see Matilal [1968], pp. 71–81.)

2.5. UNIVERSALS AS MEANINGS OF GENERAL TERMS

The main thesis of the Diṅnāga school was that 'The world consists of unique particulars (*svalakṣaṇa*): universals belong to imaginative construction, to language.' 'The world consists of individuals (*tad-vat*), which contain both uniqueness and universal properties: not all

universals are mind-dependent or imaginative constructs although some of them are.'

Nyāya contends that there are universals like cowhood which are objectively real. They can even be perceived as qualifying the individual. The Buddhists hold that universals are fictions but they can be objects of propositional attitude and serve the negative purpose of excluding an entity or a class of entities from the contradictory class. Controversy over the problem of universals is as ancient and as complicated in India as it has been in the West. In India however, the problem betrays some peculiarities which are not found in the Western tradition.

Whether *sāmānya* or 'generic property' was held to be a separate reality or not in the early Nyāya-Vaiśeṣika system may very well be debatable. But Praśastapāda expressly describes 'generic property' as a timeless objective reality which is present in many individuals.[14] The traditional arguments and counterarguments with regard to universals and generic properties have been repeated many times in the classical texts of India and we need not go into them here.[15]

The main problem in the doctrine of universals seems to be the following question: how or why are we able to apply, as we generally do, the same name (presumably a general name) to different and distinct individuals unless they are believed to belong to the same category such that we can apply the same name to them? The somewhat uncritical realism of the Nyāya-Vaiśeṣika school may claim that the applicability of a general term to many individuals is to be explained with reference to the existence of a generic entity, a universal in those individuals. But the trouble with this position lies in the fact that we cannot always specify a universal in any other way except by referring to it by a word with an abstract suffix.

The Buddhist theory of universals may be called nominalistic, but it was not exactly like Hobbesian nominalism which J.S. Mill criticized in his *A System of Logic* (I.v.2). There is, however, some similarity between Hobbesian nominalism and the Buddhist nominalism. According to Hobbes, as Mill informs us, there is no great difference between a proper name (a singular term) and a general term except that 'the first denotes only one individual and the last a greater number'. All names are treated under this theory like marks put upon individuals.

[14] See Praśastapāda, pp. 741–54. See also B. Faddegon, pp. 122–4.

[15] For a good survey of the controversy, see D.N. Shastri, pp. 306–73.

Mill has pointed out that general terms like 'cow' and 'wise' not only DENOTE individuals but unlike proper names they also CONNOTE, or imply, attributes belonging to these individuals.[16] In fact Mill's notion of 'denotation' corresponds to what the medieval logicians of the West called *suppositio personalis*, and his notion of 'connotation' (which is not very different from what we ordinarily call 'meaning') corresponds to the word *significatio* (of the medieval logicians) as used in connection with *termini communes*.[17] Hobbes' nominalism can be traced in the doctrine of Ockham, who rejected the notion of *significatio* and elaborated the 'supposition' theory with the idea that *suppositio* meant both the designation of an individual by a singular term and also the use of a general term in such a way as to cover a number of individuals. We will have occasion to refer again to the 'supposition' theory very shortly.

For the Buddhist, the purpose of applying a general name, or, perhaps, any name, is differentiation or exclusion. The Diṅnāga school seems to treat any name or term not as a genuine proper name but as a general name signifying a 'class-exclusion'. The act of naming a thing is indistinguishable from the act of differentiating that thing from everything else. Thus, when we name an object as '(a) cow', or as 'Śābaleya', we only exclude the said object from the extension of the general term or predicable 'non-cow' or 'not-Śābaleya' ('Śābaleya' being a proper name for a cow). Naming an object means excluding that object from the class of other objects. Here we can mark the same tendency to overlook the distinction between the function of a general term and that of a proper name or singular term that one finds in the nominalism of Ockham and Hobbes. But there is one difference. Instead of thinking that general terms are just like proper names with only multiple denotation, the Buddhist thinks that proper names are like general terms serving only the purpose of 'exclusion'. Thus, by emphasizing the 'exclusion' aspect of naming (which we may also call the negative aspect of our naming act) the Buddhist expected to avoid the consequence of admitting universals as meanings of general terms.

The sophisticated Nyāya realism says that a general term in a SUITABLE context may designate, or denote, a particular object, an individual. In other words, a general term can behave as a singular term

[16] Mill, I. ii. 4, 5; I. v. 2.

[17] W. Kneale and M. Kneale, p. 373. For the 'supposition' theory of the medieval logicians, see W. Kneale and M. Kneale, pp. 246–74.

in a proper context. In fact it can designate an individual belonging to a class.[18] The class-property need not always be regarded as a separate reality. Some class-properties are real and they are called 'generic property' (*jāti*). Some are not real and they are called 'imposed property' (*upādhi*).

The foregoing discussion might well have occasioned the following question: How can a general term be said to denote an individual? This leads to an important aspect of the Sanskrit language, which might have influenced, to some extent, the theories of meaning of Sanskrit philosophers.

2.6. USES OF ARTICLES AND QUANTIFIERS: 'MODES' OF REFERENCE

Standard Sanskrit differs from standard English in many important respects. A general name or a common noun like *cow* (*gau*) in Sanskrit is normally used unaccompanied by an article or determiner. Sanskrit in this respect resembles the Latin of the medieval scholastic philosophers. The medieval philosophers of the West developed their theory of 'supposition' under the influence of the Latin in which they wrote.[19] The Sanskrit (for example, proto-Nyāya) 'denotation' theory holds that any name including a general name like *cow* has various modes of 'supposition' or reference, but its primary function is to put a name-tag on an individual. Which mode of reference a general term has in a given sentence is generally gathered from the 'context' or from the total sense of the sentence. It is very seldom that an article or a determiner is used to show the mode of reference.

That various 'contextual' factors can tell how a general name like *cow* may express, or refer to, a particular individual (even though no articles, etc. are used) has been noted as early as *Nyāyasūtra* 2.2.60–7. The following are some of the various 'contextual' factors that may indicate that *cow* means an individual cow:

(a) use of demonstratives, for example, *that cow*, or use of relative pronouns, for example (*the*) *cow that stands there*,
(b) use of such words as *group* or *assemblage*, for example, *a group of cows*,
(c) accusative or patient relation with such verbs as *gives away* and *accepts* or *grabs*, for example, *He gives away* (*the*) *cow* and *He accepts* (*the*) *cow*,
(d) use of number suffixes or numeral adjectives, for example, *cows*, *two cows*,

[18] See Gadādhara, *Śaktivāda*, pp. 193–4. Also Jayanta, p. 295f.
[19] Geach, pp. 52–3.

(e) application of such predicables as *grows fat, becomes emaciated*, for example *(the) cow grows fat* and *(the) cow has become emaciated*,
(f) application of colour predicates, for example *(the) cow (is) white*,
(g) combination (in normal compounds) with such words the meanings of which are compatible with only particular individual cows, for example, *horns of (the) cow* or *the welfare of (the) cow* (Vātsyāyana's example is ambiguous because *cow* in such a context may refer to an individual cow or to cow-class. But the point here is that it cannot refer to the class-property, cowness. The case is the same with the next example of Vātsyāyana: *[A] cow is born of [a] cow*).

I have supplied here the articles (mostly definite articles) in parentheses while in the corresponding Sanskrit sentences no articles were used. The only 'determiner' that one can possibly find in these cases is the numeral suffix indicating singular number.

We will see that the dispute between the Universalist and the Individualist (cf. the views of Vājapyāyana and Vyāḍi, given in chap. 3, section 3.4) over the import of a term was a bit ambiguous. It was not made clear whether, according to the Universalist, a general term like *cow* should mean the class-property cowness (as Vātsyāyana apparently thought) or to the cow-class as a whole. If we take the first alternative, it would be difficult to find a sentence where one would simply use *cow* to refer to cowness. In fact, we actually use 'cowness' to refer to cowness. The only reasonable interpretation of this alternative would be that the Universalist simply wants to regard primarily what we may call 'connotation' (or even 'intention', using the terminology of R. Carnap)[20] of a general term as its 'meaning' (*artha*), the 'denotation' or 'extension' being only a DERIVATIVE of this primary 'meaning' (*artha*). If, however, we accept the second alternative, the contention of the Universalist simply amounts to saying that a general term like *cow* mean, that isthe cow-class. But in that case, at least one of Vātsyāyana's counterexamples, viz., *(A) cow is born of (a) cow*, to disprove the contention of the Universalist (see above), would seem pointless.

Moreover, if the Universalist's slogan 'The MEANING of a term is the universal' is interpreted in the second way, then it will actually be indistinguishable from the 'denotation' theory. The only difference between this and the Individualist's slogan 'The MEANING of a term is the individual' will be this: The former thinks that the primary use of a general term is to denote an entire class, or, to refer to each member of the class, and we may 'derive' a singular term from the general term *cow*

[20] Carnap, pp. 18–19.

by a suitable choice of the 'context'; the latter thinks that the primary use of any term is to denote, or refer to, an individual, not an entire class, and we can 'derive' a general term denoting each member of an entire class by a suitable choice of the 'context'.

If this analysis is accepted, then there is much justification for the Nyāya name-tag theory which is only a combination of the two views just mentioned. A term denotes an individual, and sometimes a general term denotes an entire class or each member of that class (cf. *Nyāyasūtra* 2.2.67; I shall skip here the discussion of the third mode of 'denotation' by which the term 'cow' refers to the shape [*ākṛti*] of a cow as in the example *Make a wooden cow*. It may be noted in passing that Mīmāṃsākas like Śabara and Kumārila interpreted the term '*ākṛti*' as 'class-property.')[21]

Uddyotakara and Jayanta cite the following example 1 in support of the first mode of 'denotation' (viz., the view that a term refers to an individual) and example 2 in support of the second mode of 'denotation' (viz., the view that a term refers to each member of a class).[22]

1. *(The) cow is running.*
2. *(A) cow should not be kicked or touched with our foot.*

If we use the symbols for quantifiers of quantificational logic, example 2 can be clearly paraphrased as:

(x) (x is a cow $\supset$ x should not be kicked).

Note that in standard English as well as in standard Sanskrit one can use *all* or '*sarva*' to express in effect the same sense, but such an expression with *all* or '*sarva*' will be regarded as simply a stylistic variant of 2. And the import of Vātsyāyana's ambiguous counterexample can be explained by the following paraphrase:

(x) (x is a cow $\supset$ $[\exists y]$ [y is a cow, x is born of y]).

In quantificational symbols we can write a general term as '[Fx]', that is, 'cow' as '[x is a cow]'. (Square brackets here indicate that it is a term, not a proposition.) From such a general term we can 'derive' a singular term by using the following symbol: '[(ix) Fx]'. Thus, 'the cow' can be written as: '[G(ix) (x is a cow)]', if we use 'G' for

[21] Śabara, under *Mīmāṃsāsūtra* 1.1.5; Kumārila, *Ślokavārttika*, *Ākṛti* section, verse 3.

[22] Uddyotakara under *Nyāyasūtra* 2.2.67; p. 319. Jayanta, p. 290ff.

'is running'. This can be again paraphrased according to Quine's system[23] as:

$(\exists y)$ [y is running. (x) (x is a cow $\equiv$, $x = y$)].

In fact, the system of quantificatioinal symbols follows the practice in standard English. In English we also DERIVE a singular term, viz., 'the cow', from a general term by adding the definite article. Sometimes, the use of the indefinite articles 'a' and 'an' serves the same purpose. But there are many cases where the use of 'a' or 'an' leads to ambiguity in English. These can be solved by taking into consideration the context, the intention of the speaker, and so on.[24] Thus, for example, *Each boy admires a girl* can be paraphrased as:

(x) [x is a boy $\supset$ $(\exists y)$ (y is a girl. x admires y)].

But, if *Each boy admires a girl* occurs as a part of the sentence 'Each boy admires a girl and most girls envy her, that is, that girl' we cannot paraphrase it as before but we will have to use the following paraphrase:

$(\exists y)$ [y is a girl. (x) (x is a boy $\supset$ x admires y)].

P.T. Geach has pointed out that in the former, 'a girl' could be an instance of *suppositio confusa*, according to the medieval theory of supposition, whereas in the latter 'a girl' would be an instance of *suppositio determinata.* Under the medieval theory of supposition in the West, we have already noted that a term like 'cow' will have different 'modes' of supposition: one 'mode' corresponds to the use of a singular term, another mode to the use of a general term signifying a class-attribute, for example, cowness.

What is really at issue may be clarified as follows: The theory of 'universal grammar' requires that singular terms, and general terms (and also plural terms) have distinct grammatical forms. On a stronger interpretation, this will mean that we need a uniform (context-free) grammatical indication for these terms. This is realized in the construction of the system of quantificational symbols. But on a weaker interpretation, this may mean that we need simply an indication in the underlying structure of the whole sentence, which may even fail of separate phonological realization.

Thus, the preceding paragraphs have not just been an exercise in

[23] Quine [1961], pp. 215–24.
[24] Geach, pp. 87–98.

the manipulation of quantification symbols. We are now in a position to see somewhat clearly the points of contrast. In quantificational theory (as well as in ordinary English), singular terms like 'a cow' or 'the cow' are DERIVED from general terms. In the medieval theory of supposition, the functions of a general term and the corresponding singular term are regarded as co-ordinate MODES of supposition of the same term. Gautama's *Nyāyasūtra* 2.2.67 might be interpreted in a way which will be closer to the supposition theory. But the predominant Nyāya theory expounded by Naiyāyikas like Jayanta was slightly different from the version of the supposition theory just stated.

Nyāya generally supports a modified version of the Individualist's slogan: a term refers to the individual. Jayanta points out that our problem arises mainly in connection with those terms which we call class-names (*jāti-śabda*) because a proper name or a genuine singular name like 'the sky' or 'Ḍittha' (which Jayanta calls 'substance-name' *dravya-śabda*) can very well be said to refer to the individual without the intervention of any class-property.[25] According to Nyāya, a class-name like 'cow' stands, in most contexts, for a particular member (an individual) of the class as qualified by the class-property. The implication is probably that a class-name usually behaves more or less like a singular term referring to one individual. Although definite articles or determiners are not explicitly used, the 'context' indicates that it is one individual that is being referred to.

The fact that the same class-name is applicable to many individuals (as in example 2 above) prompted the Universalist to claim that the class-name should therefore EXPRESS or stand for the class-property which is the common factor of those individuals. Nyāya points out that in any use of a class-name like 'cow' the class-property cowness is IMPLIED as the qualifier of the individuals. Thus, the applicability of a class-name to many individuals may be explained with recourse to the class-property, but the class-name itself directly stands for the individuals. The difference between a genuine proper name like *Ḍittha* and a singular term corresponding to a class-name, for example, 'a cow', is that in the latter case the individual referred to is reckoned as qualified by the class-property.

In example 2 above, the class-name 'cow' stands for each member belonging to the class. Thus, Jayanta notes that a universal quantifier

[25] See Jayanta, Part I, pp. 271, 298. Contrast this with Diṅnāga's list of five qualifiers.

like 'all' (*sarva*) is implicit in the sentence (see Jayanta, p. 297, line 28). But this does not do any harm to the original 'denotation' theory. One may say that the class-property or the universal gains some prominence in this kind of example because we can treat the class-name as a general term or predicable predicating the class-property of all the individuals for which the term stands. But it is clear from the symbolic transcription of example 1 above that even in the case of a singular term, viz., 'a cow' or 'the cow', derived from the class-name 'cow', we can treat the class-name as a predicable predicating the class-property cowness of a definite individual.

2.7. THE PROBLEM OF 'REAL' UNIVERSAL (*JĀTI*)

Now to come back to the ontological problem about universals. Do universals exist? Nyāya claims that a 'generic property', in the sense described above (section 5) is a real entity. In other words, a generic property exists. Generic properties help us to make natural classification of objects; and there is a hierarchy of generic properties, 'existence', or 'being-ness' being the highest one, which is present in all existent things. The next in hierarchy are the following three, all of which are at the same level: the generic property of being a substance, that of being a quality and that of being an action or a motion. (Here, 'substance' [*dravya*], 'quality' [*guṇa*] and 'action' [*karma*] are to be considered specifically in the Vaiśeṣika sense; see Faddegon.)

A typical example of a generic property is cowness. Nyāya claims that cowness is real in the sense that apart from cow-individuals there is a separate entity, cowness, which is present or 'manifested' in all cows. Unlike Plato's universals or ideas, cowness, according to Nyāya, is not a denizen of another, more real, world, that is, not the creative archetype of the existent cows. Cowness is more like an Aristotelian universal which can be predicated of many. Cowness is timeless, that is, permanent, but is manifested in a cow. If all cows are destroyed, where would cowness go? An Aristotelian can get around this difficulty by resorting to the doctrine of potentiality and actuality. The Nyāya says that cowness is present always and everywhere but can only be 'manifested' in a cow. (See Udayana's *Kiraṇāvalī*, p. 150.) Without such a manifestation, we will not be able to cognize cowness. Thus, with the extinction of cow-species, cowness will not die. Cowness is present by the relation of 'inherence' (*samavāya*; see section 3) in a cow, and

roughly this is what is meant by 'manifestation' (cf. Udayana's *Kiraṇāvalī*, pp. 156–7).

We can put the matter simply as follows: 'A cow exists' means that a cow exists at a particular time and at a particular place. But 'cowness exists' does not have such a meaning. 'Cowness exists' means that cowness is an ontologically distinguishable entity.

It has been noted already that the Naiyāyikas from Uddyotakara onwards have emphasized that not all universals should be construed as real over and above the individuals by which they are instantiated. The notion of belonging to the same class (cf. *anuvṛtti-pratyaya*) may be generated by various means. For example, the notion of belonging to the class of cooks is explained as being due to the fact that each member has chosen cooking as a profession (or, does cooking at some time or other). Hence the class-concept 'cook-ness' need not be construed as a generic property (*jāti*), that is, as a real universal.[26]

Similarly, the notion of belonging to a class expressed by the predicate 'is a generic property' should not be explained with recourse to another generic property. It is true that we say, 'Cowness is a generic property', and 'Horseness is a generic property' and so on. But 'is a generic property' unpacks as 'is a REAL property which exists (that is, inheres) in many individuals', and hence we need not construe its meaning as a separately existent entity. One may point out that we can do the same sort of 'unpacking' with respect to such cases as 'is a cow' and 'is a horse', and thus get rid of the whole concept of generic property or real universal. In fact, Nyāya follows a similar procedure with respect to the predicate 'is a beast', which is unpacked as 'is that which possesses tail and special body hairs'.[27] Hence, 'beastness' is not regarded as a generic property. Thus, if we can find out some empirically determinable CONDITION by virtue of which the applicability of a general term to different individuals can be satisfactorily explained, we need not derive a generic property from the meaning of such a general term. But, Nyāya claims that short of some artificial definitions predicates like 'is a cow' or 'is a horse' cannot be explained away. Thus, cowness and horseness should be regarded as generic properties. But this argument may not be convincing.

What Nyāya is trying to say here might be understood in the following way. A class-property must be simple, non-complex or non-compound, in order to be construed as a generic property. Again, not

[26] Uddyotakara, pp. 316–17.

[27] See Ingalls, p. 41.

all 'simple' class-properties will be generic properties. There are other conditions to be fulfilled before a 'simple' class-property is construed as a generic property. Udayana notes these conditions in a list which he calls 'the list of impediments to generic property'.[28]

The following principles may be formulated as underlying the *Nyāya* doctrine of generic property or real universals:

(a) A generic property must be SIMPLE. This may be understood in two ways. First, it denies that a class-property which is the result of the logical product of two or more original classes could be a generic property. Thus, a general term like 'cow' indicates a generic property, but 'white cow' or 'big white cow' does not.[29] Second, there are some apparently unanalysable properties, but on examination they are found to be not SIMPLE in the required sense. One such example is 'absenceness' (*abhāvatva*). It is NOT derived from the result of the logical product of two or more original classes. It is only the common property of all absences, but the notion of absence of something *x* is essentially dependent upon the notion of the thing *x* that is absent. Similarly, relational abstracts like 'father-ness' (*pitṛtva*) and 'counterpositive-ness' (*pratiyogitā*) are not SIMPLE. Another example is 'cowness-ness' (*gotvatva*). The possible meaning of *cowness-ness* is that it characterizes the generic property cowness. What could possibly be the characterizing property of cowness? One may say (as Nyāya actually says) that it is the fact that cowness is present in all cows and absent from anything that is not a cow. This is thus not a SIMPLE property but the intensional content of a proposition. Roughly 'simplicity' in this context means non-compounding and non-dependence. But it is difficult to give a clearer and more precise characterization of the notion of 'simplicity' involved here. (See also section 9.)

(b) A generic property must be realized in more than one actual individual. The unit class-property is not a generic property. Thus, 'sky-ness' is an imposed property.

(c) Two generic properties will be identical if and only if they are realized or instantiated in the same members of a class, that is, in the same individuals. (Compare the notion of extensional identity of two classes in class logic: Two classes with the same members are identical.) Two general terms which are either synonymous or co-extensive in their application cannot IMPLY two different generic properties.

(d) A generic property cannot be instantiated in another generic

[28] Udayana, *Kiraṇāvalī*, p. 161.

[29] Ingalls, p. 41, 41n.

property. The individuals in which generic properties are instantiated must have some type-difference from the generic properties. This stipulation also implies that the category of 'generic property' should not be regarded as an instantiation of the HIGHEST generic property Existentness or Being-ness (*sattā*) because otherwise Existentness itself would be an instantiation of Existentness and we will end up with an infinite regress.

(e) Ultimate particularities (*viśeṣa*) of the Vaiśeṣika system cannot be instantiations of any generic property. These ultimate particularities are, by definition, unique and self-differentiating (like the Buddhist 'unique particulars' *svalakṣaṇa*) and hence cannot instantiate any common property, and *a fortiori*, any generic property.

But an individual (*tad-vat*), for example, an atom, can be the locus of ultimate particularity by which it is supposed to be distinguished from other atoms, and at the same time it can instantiate generic properties like 'substance-ness' or 'earth-ness' (for example, we can say 'it is a substance' or 'it is an EARTHLY substance').

(f) A generic property occurs in individuals by the relation of inherence. Inherence, as we have seen, is an inseparable relation. The Vaiśeṣika says that it is a real relation, and hence a real universal. This relation is ONE and unitary, and has manifold instantiations. The same relation connects generic properties to their manifold instantiations, material bodies to their constituent parts, 'qualities' (*guṇa*) and motion to their substrata (substances). But this relation itself cannot be the locus of some generic property because otherwise we will be led to an infinite regress. In other words, the supposed generic property would have to reside in inherence by another inherence, and the second inherence might be the locus of another generic property which should reside in a third inherence and so on.

The inseparable relation, inherence, serves another important purpose for the Vaiśeṣika school. The generic property and the individual where it is instantiated can occupy the same spatial spread by virtue of the fact that one inheres in the other. We may recall that a material body (*avayavin*) and its parts (*avayava*) do not violate 'the impenetrability principle' of bodies because one is NESTED in the other by inherence relation. The 'impenetrability principle' will again concern us when we discuss the next condition.

(g) Each generic property (except the HIGHEST one) is NESTED in a higher generic property. (Contrast this with our use of NESTING in section 3. The common factor between these two uses of NESTING is that the notion of NESTING allows two or more different entities, objective

realities, to occupy the same spatial spread without violating the 'impenetrability principle'.) Two generic properties can co-exist, that is, can reside in the same individual, provided one of them is 'lower' (*apara*) and the other is 'higher' (*para*) in the sense that the class of individuals having the first generic property is only a sub-class of, and hence completely included in, the class of individuals having the second generic property. There is, thus, a hierarchy of generic properties, the highest being Existence (*sattā*).

If we violate this principle in setting up generic properties, we fall into what is technically called the defect of 'cross division' or 'overlapping' (*saṃkara*).[30] If the extension of one class partially overlaps the extension of another class so that some individuals become members of both classes, then neither of these two class-concepts can be construed as generic properties. To put it in another way, an individual cannot be characterized by two different generic properties unless one of them is completely NESTED in the other. If we can set up a 'tree' showing the hierarchy of generic properties with the highest generic property Existentness at the top, then two generic properties *a* and *b* can be said to have the NESTING relation between them if and only if one lies in the 'path' of the other approaching the highest one, Existentness.

The above condition of Udayana seems to be based, as I have already remarked, upon some sort of 'impenetrability' requirement of objective realities. Generic properties, for the Naiyāyikas, are objective realities, not subjective constructs. Thus, two generic properties should not occupy the same space much in the same way that two material bodies cannot occupy the same space because they are 'impenetrable'. Thus, two class-concepts or class-properties may even be SIMPLE in the sense described in condition (a) above, but they cannot be generic properties if they do not fulfil the 'impenetrability' requirement described here. In other words, if there is 'overlapping' between class-members, then the class-properties cannot be set up as generic properties.

From one point of view, the Nyāya doctrine of generic properties can be said to be due to the instinctive inclination toward the NATURAL classification of objects of our experience. 'Overlapping' destroys, in some sense, the natural order of classification, and hence if there is any 'overlapping' between classes, Nyāya rules that those class-properties cannot be set up as REAL generic properties. They are at best 'imposed' class-concept.

[30] See Matilal [1964–5].

From another point of view, one might discover in the Nyāya doctrine of generic property a remote influence of the socio-religious ideas of the Brahmins. Translated into biological terms, the above principle of 'non-overlapping' becomes a principle which opposes cross-breeding. There is thus some evidence that the Nyāya bias for real generic properties was partly influenced by the Brahminical concept of an ideal social structure where intermixture of classes is not to be permitted.[31]

Some later Naiyāyikas denied that 'overlapping' would be any bar to the setting up of a generic property. On this view, any SIMPLE class property would be a generic property (as noted in (a) above). For the sociologists, this may be an advancement, but for philosophers this appears to be conservatism. By introducing the condition of 'non-overlapping' Udayana rejected objective reality of a considerable number of universals. It is ruled that they are constructed class-properties. Their existence is not distinguishable from the individuals that possess them. Thus, Udayana's theory was a step forward in getting rid of strange entities like universals and in recognizing the function of the more important and useful notion of class-concept. But rejection of the condition of 'non-overlapping' may mean a step backward.

2.8. THE NOTION OF 'PROPOSITIONAL' PERCEPTION

Diṅnāga's charge against perceptual judgment or constructive perception (*savikalpa-pratyakṣa*) is that at best it amounts to imaginative construction and is cut off from reality. The epistemological realists of India, the Nyāya-Vaiśeṣika philosophers and the Mīmāṃsākas of the post-Diṅnāga period, have tried to refute Diṅnāga's charge and to vindicate perceptual judgment. It has been the fashion from Diṅnāga onwards to talk in terms of two different MODES or TYPES of perception, the judgmental and the non-judgmental. But the interpretation of the non-judgmental perception differed in the hands of different philosophers.

Praśastapāda mentions a kind of 'simple perception' (*ālocana*) of the BARE object and goes on to account for the emergence of the perceptual judgment when we qualify the bare object with various qualifiers. Let us concentrate upon the notion of 'simple perception'. For

[31] Thus, one may note Jayanta's concern over the problem; how can the class character *brāhmaṇatva* be perceived? See Jayanta, Part I, p. 204. See also Śrīdhara's remarks, pp. 34–5.

Praśastapāda, this simple perception is the 'psychological first' and is followed by what we may call 'propositional' perception, that is, perceptual judgment. The simple perception is also described as a means of knowledge (*pramāṇa*), that is, a means leading to propositional perception such as 'this is a cow'. In this simple, non-constructive perception, there is no differentiation between the qualifier and the qualificand. It is the perception of an 'undifferentiated' (*avivikta*) whole.[32]

Kumārila has a very interesting discussion of perception, which may be treated as an elaboration of Praśastapāda's view noted in the preceding paragraph. Perception is divided into two types: simple or non-constructive, and constructive or judgmental. The first consists in our mere awareness of the object's existence or presence without any interpretation, that is, without differentiation and classification of the object grasped. It may be conceded that even at this state all specific and generic characters of the object are, in fact, present in the 'given' in an indefinite way. But the particularity or the generality is not differentiated, that is, is not grasped at this stage AS a particular feature or AS a general feature because such a procedure would involve comparison and constructive judgment. This non-constructive state is more a passive reception than an active construction. There is nothing odd in saying that generality and other qualifying features are grasped AS mere existence (*sat*) but not AS generality or AS differentiating features.

The main difference between Diṅnāga's non-constructive perception (which is the only kind of true perception for Diṅnāga) and this 'simple perception' of Praśastapāda and Kumārila can be stated as follows: Both are 'psychological firsts' and both grasp the entire object. But, for Diṅnāga, this moment is followed by 'addition' (*yojanā*) or superimposition of fictional qualifiers. For Praśastapāda and Kumārila, this moment is followed not by 'addition' or superimposition but by analysis and propositional arrangement of whatever was present in the undifferentiated whole of the first moment.

[32] See Praśastapāda, p. 443ff. H.N. Randle's interpretation of Praśastapāda's passage is somewhat misleading. See Randle, p. 107ff. For criticism of Randle, see Hattori [1968a], p. 161ff. I agree in general with Hattori's interpretation. An incidental note on terminology: The term 'non-qualificative' for the Sanskrit *nirvikalpa* was first used by me in order to suit the sense that Navya-nyāya tries to attach to *nirvikalpa*. See Matilal [1968], p. 12. Hattori uses 'non-qualificative' for two types of *nirvikalpa*. But I prefer to use 'non-constructive' for one type of *nirvikalpa* and 'non-qualificative' for the other type (the Navya-nyāya type) of *nirvikalpa*.

Kumārila cites two examples to illustrate his point. When a person enters into a dimly lit room after travelling in the hot sun, he can, at first, only vaguely perceive several objects or several 'existents' in that room. And only gradually he can identify one AS a chair, the other AS a table and so on. The other example can be better explained by citing the case of orchestral music. When orchestral music is being played, the perception of a layman and that of a connoisseur of music will be different in that the latter will be able to identify each note and the sound of each instrument and their harmony whereas the former will hear it simply as music without interpretation or technical classification. But in any case we cannot say that the perception of one is false because he makes use of his previously acquired knowledge while that of the other is true because he is incapable of doing so. It is conceded that in the constructive perception 'this is a cow' we compare our previously acquired knowledge, and being aided by memory we classify, differentiate, and interpret. But all these will not make our cognitive state in any way less perceptual as long as our senses are in contact with the 'given'. If, however, somebody closes his eyes immediately after sense-object contact and proceeds to classify and differentiate the object mentally, Kumārila notes, we can say that it is mere thought-construction and not perception.[33]

Śālikanātha, the Prābhākara Mīmāṃsāka, comments that the Buddhist theory of perception and language might hold if there were no permanent knower apart from discrete momentary cognitive states. If there were no person or self as knower, the non-constructive perceptual event would stand in isolated glory and the intervention of language, memory, and concepts would turn the constructive state into a completely different cognitive state. But a self as a knower is posited by the non-Buddhist philosophers since it serves as a unifying principle of all momentary cognitive events. Diṅnāga's theory of perception and language stands and falls along with the Buddhist theory of non-soul and the doctrine of momentariness.[34]

Jayanta points out further that the Buddhist contention that constructive perception is not dependable as a means of knowledge rests upon the acceptance of the Buddhist doctrine of momentariness of all objects. This 'momentariness' doctrine is a logical development of the earlier Buddhist doctrine of 'impermanence' (*anityatā*) of everything.

[33] Kumārila, *Ślokavārttika, Pratyakṣa* section, verses 112–254.

[34] Śālikanātha, pp. 164–5.

Thus, if the thesis of momentariness is rejected, Diṅnāga's theory of perception and imaginative construction can be discredited.[35]

Jayanta actually attacks Dharmakīrti's discussion of perception and raises some interesting points. A perceptual judgment 'this is a cow' is called imaginative construction because apart from the sense-object contact we are aided here by many extraneous factors such as memory-impressions derived from previous experience and comparing of the present with the previous occasion. But why should all these so-called extraneous factors necessarily affect our judgmental perception in such a way that it will lose contact with reality and slip into the world of fiction? With some special illumination or brighter light we can perceive dust particles which we would not have seen under ordinary light. But dependence upon this accessory (*sahakārin*), viz., special illumination, cannot turn perception of dust particles into 'construction of dust fictions'. Similarly, dependence upon other accessories cannot, of necessity, turn a veridical perception into a mere fiction.

If it is argued that the non-constructive perceptual state grasps the 'given' in its totality and what follows next can thus only be a superstructure and hence useless, then Jayanta points out that what we apprehend or grasp in our non-constructive perception can hardly be unanimously established. The Diṅnāga school claims that it is the 'exclusive particular'. Kumārila says that it is the BARE existent. The grammarian school of Bhartṛhari claims that it is the indivisible and imperishable speech-reality. Thus, over talk of the *nature* of what is 'given' in non-simply amounts to empty theorizing. Jayanta contends that whatever is grasped by our perceptual judgment was also grasped by our previous non-constructive perception. The only difference is that in the judgmental state we verbalize, implicitly or explicitly, what we see, in a 'propositional' (qualificand—qualifier) form, and this cannot be done in the prejudgmental state.[36]

The upshot of the arguments of Kumārila and Jayanta is that they disagree with the basic assumptions of the Buddhist. Why should we admit, as the Buddhist wants us to do, a complete severance between the pre-judgmental state and the judgmental perception? True, our judgmental perception sometimes imputes to the 'given' a character which it does not really possess, and thus we have a non-veridical perception. This may only call for a reformulation of the definition of TRUE

[35] Jayanta, Part I, p. 88f.

[36] Jayanta, Part I, p. 92, lines 21–2.

perception, but a total rejection of all types of constructive perception as untrustworthy is not in order here. Thus, Jayanta remarks that the theory of 'imaginative construction' (*vikalpa*) and 'exclusion' (*apoha*) is of a piece with the theory of universal transcendental illusion, and hence as little to be trusted.

There is some oddity in saying that our first sense-perception (which is not even so organized as to be expressed in language) is attended with a sense of certainty and security which the organized and systematized judgmental perception that follows does not possess. The later Naiyāyikas thus assert that we feel more certain about our judgmental perception than we do about the first bare awareness of the 'given'. This leads us to a discussion of the theory of 'apperception' by which a perceptual state is revealed.

The Diṅnāga school describes the non-constructive perception as being 'self-conscious'. Thus, when a man sees an object x he also sees (that is, is aware) that he sees x. This may be called the self-illumination or self-revelation theory of cognition.[37] In fact, the self-illumination theory of cognition is accepted, in some form or other, by most idealist, as well as non-idealist, philosophers. Even the Prābhākara Mīmāṃsāka (who is not an idealist) accepts this theory but formulates it in a special way.[38] According to the Diṅnāga school, each cognitive state consists of a two-fold appearance, the object-appearance and the appearance of itself. In other words, a cognitive state while cognizing an object also cognizes itself.[39]

The Naiyāyikas hold that cognitive states are not 'self-conscious' or 'self-luminous' but rather that we have to have a second cognitive state to 'reveal' the first one. They develop the theory of 'apperception' or 'reflective awareness' (*anuvyavasāya*) and maintain that our reflective awareness TELESCOPES a cognitive state while it itself becomes another cognitive state. The usual charge against the Nyāya theory of non-self-illumination of cognition is that it leads to infinite regress. Briefly the charge may be stated as follows: if c_1 is revealed in the cognitive state c_2 we will need c_3 to reveal c_2 and so on. This charge

[37] For divergent views regarding how a cognitive state is cognized, see Stcherbatsky, *Buddhist Logic*, Vol. I, pp. 164–6. See also Matilal [Review of Mohanty], pp. 323–4.

[38] See Matilal [1968], pp. 125–6.

[39] M. Hattori has discussed this point in detail and explained the Sautrāntika and Yogācāra positions. See Hattori [1968], pp. 101–6, 108–9.

has been repeatedly mentioned by almost all the opponents of the Nyāya theory of non-self-illumination, though the Nyāya thinks that the charge is entirely baseless. Anyway, the later Naiyāyikas have claimed that a judgmental or constructive cognitive state can be determinate and amenable to 'apperception' whereas the existence of a pre-judgmental state can only be proved by some sort of inference (see next section).

To sum up: Post-Diṅnāga philosophers of the non-Buddhist camp were unanimous on one point. A judgmental perception is not just an imaginative construction or subjective manipulation: it reflects instead the structure of the world, or perhaps, we should say that it forms a structure (a 'propositional' or qualificand-qualifier structure) out of whatever is grasped by our pre-judgmental state. 'Although verbalization may not take place at that prejudgemental state,' the judgmental state reveals that it certainly can be verbalized.

The contention of Bhartṛhari that in any cognitive state there must be at least an IMPLICIT speech-form is also considered untenable. There is no paradox involved, for example, in holding that a man SEES a cow without taking it to be a cow. There may be some oddity in saying that a man sees an object *x* without wanting to say that he also takes what he sees TO BE something. And to take the object to be something means to associate it with at least an implicit speech-form. This was perhaps what Bhartṛhari implied when he made the above claim. But to admit that a man takes *x* to be *something* does not amount to the admission that he takes *x* to be some particular thing. 'The man takes *x* to be *something*' simply implies that he is aware of *x*'s existence. Thus, it is possible to have a cognitive state revealing the bare existence of *x* without any 'propositional' or 'qualificand-qualifier' construction. The non-constructive perception of Diṅnāga can in this way be regarded as a counterexample to Bhartṛhari's claim as it is usually understood in later philosophical writings (which may have been a mis-understanding (see Matilal 1990).

2.9. NON-QUALIFICATIVE PERCEPTION IN NAVYA-NYĀYA: 'SIMPLE' PROPERTIES

Navya-nyāya argues for a type of non-judgmental perception which need not be our 'psychological first' and hence differs from the 'simple' perception of Kumārila and Jayanta. For convenience I shall call it 'non-qualificative' perception. This is an interesting and important

new development in Indian epistemology although its origin can be traced back to the *Vaiśeṣika-sūtras* of Kaṇāda. Our exposition below is mainly based upon the text of Gaṅgeśa.[40]

Gaṅgeśa defines the non-qualificative (*nirvikalpa*) perception (almost in the manner of Diṅnāga) as that which is devoid of the adding of names, class-concepts, etc. (cf. *nāma-jāty-ādi-yojanārahita*, Gaṅgeśa, Part I, p. 809). He adds that this cognitive state does not take cognizance of 'qualified-ness' (*vaiśiṣṭya*), that is, qualification. In other words, it is non-judgmental, and its content is non-propositional. Gaṅgeśa explains that the object in this state does not appear AS (qualified by) something.

The question arises: how can this state be called a cognitive state (*jñāna*), an awareness as distinguished from pure sensory reaction? The following answer is not a valid one: our 'psychological first' is an awareness of the 'undifferentiated' whole and is followed by some differentiation and ordered arrangement in a judgment at the next moment. Thus, the theory of Praśastapāda and Kumārila, the theory which was elaborated by Jayanta and partially by Vācaspati in a confused manner, is not regarded here as an adequate answer to the problem posed by the Diṅnāga school. One may ask: how are we aware that we grasp an undifferentiated whole at the first moment? The problem cannot easily be solved because it is hardly possible that such a cognition of an undifferentiated whole will be registered in our apperception or reflective awareness. If we accept, on the other hand, the self-illumination theory of cognition, the Diṅnāga school can say with equal cogency that we grasp at the pre-judgmental state the bare particular, the only real entity, which is a self-distinguished and self-sustained 'moment'. What comes next is just a fictional construction.

Thus, the answer to the question raised in the beginning of the last paragraph is that the non-qualificative perceptual state, as distinguished from the sensory reaction, should be regarded as a 'logical first', or even a 'causal first', instead of being a 'psychological first'. Navya-nyāya uses here a principle which was implicit in the *Vaiśeṣika-sūtra*, sometimes mentioned by Praśastapāda, and only partially mentioned by Vācaspati and Śrīdhara.[41]

[40] Gaṅgeśa, Part I, pp. 806–42.

[41] *Vaiśeṣika-sūtra* VIII. 9. Praśastapāda mentions this principle while he is discussing *saṃkhyā* 'number'. See Praśastapāda, pp. 288–9. See also Śrīdhara, p. 276f. For a critique of Vācaspati's remark, see Hattori [1968a], p. 165ff.

Gaṅgeśa tries to establish a sort of logical priority for the non-qualificative perception in the following way. Judgmental or constructive perception belongs to the class of what Navya-nyāya calls 'qualificative cognition' (*viśiṣṭa-jñāna*).[42] When one is being first acquainted with the object cow through perception, a non-qualificative perceptual state must precede the 'qualificative' perception of the cow. The reason is explained as follows: A qualificative perception takes the form of a proposition '*x* is *F*' or '*x* has *f*' (where *f* is called the 'qualifier' *prakāra*). Now, *f* cannot be cognized AS qualifying *x* unless *f* itself is cognized prior to tis qualificative cognition. In fact this '*f*' functions here as a pre-defined or assumed primitive of the constructed formula '*x* has *f*'. When one perceives a cow for the first time and asserts that this is a cow, the perceptual assertion is believed by the Nyāya to be causally determined by one's prior (perceptual) cognition of cowness (which serves as the qualifier in the resulting assertion). The alternative suggestion (apparently by Bhartṛhari's followers) that this required prior cognition of cowness may not be perceptual but it can very well be accounted for by the perceiver's revived memory from a previous birth is too far-fetched to deserve serious consideration.

But the opponent of the *Nyāya* school may say that a simple conception of cowness is all that is required to have a qualificative cognition that something is a cow (that is, is qualified by cowness) and this simple conception of cowness may be gathered from many other sources of knowledge. Gaṅgeśa apparently concedes this point and says that not all our perceptual judgments are preceded by a non-qualificative perceptual state. Thus, it will not be a criticism of Gaṅgeśa's theory, if we say that a prior awareness of the qualifier cowness does not have to be perceptual and hence there is no need for accepting a non-qualificative perceptual state. Gaṅgeśa appears to claim that any cognitive state might have a 'non-qualificative' constituent, provided some element of its content appears as such, that is, unqualified by anything. Thus, 'the woman perceives that it is a cow' implies that the woman perceives something as qualified by cowness (cow universal), but cowness may appear in such a cognition without being qualified by anything. As far as Gaṅgeśa is concerned, there is no harm in calling this cognition a non-qualificative cognition of cowness.[43]

Nyāya holds the principle that a qualificative or 'propositional'

[42] See also Matilal [1968], p. 11ff.
[43] Gaṅgeśa, Part I, p. 823.

cognition is produced by a prior cognition or conception of the qualifier. This is actually an extension of another empirical law about which there is some agreement between Gaṅgeśa and his opponent. This law operates in the case of more complex perceptual judgments. We might state this law as follows: When we have a qualificative or propositional cognition where the qualifier or the predicative element involves a further qualification or predication, we have a case of what may be called 'qualificative cognition of higher order' (the Nyāya calls it the *viśiṣṭa-vaśiṣṭyāvagāhi-jñāna*). The example is

A. 'The tree has green leaves.'

Here the qualificand is the tree and the qualifier or the predicate element is expressed by 'green leaves'. But the predicate element itself involves a further qualification or predication. In other words, 'green colour' qualifies, or is predicated of, the leaves. (Our present remark should not be taken to have resulted from 'a confusion between terms and propositions'; see next section.) Now, the principle of the Naiyāyikas says that to formulate the complex judgment of the above kind (that is, judgmental cognition expressed in sentence A) we need to formulate first the complex predicate or the qualifier itself. In other words, the judgment 'the tree has green leaves' is causally dependent upon an implicit judgment 'the leaves are green' (or, 'something is green').[44] Thus, Gaṅgeśa claims that if this complex judgment is perceptual then the implicit judgment regarding the 'complex' predicate element or qualifier should also be perceptual unless we happen to acquire that judgment through other means.

Gaṅgeśa argues that if the causal law holds in the case of a 'complex' qualificative cognition (that is, qualificative cognition of higher order as in A) it can be extended to the 'simple' qualificative cognition such as

B. 'This is a tree.'

In fact the 'causal' law that the formation of a 'complex' qualificative cognition is causally dependent upon the formation of a cognitive state (a judgmental one) ABOUT the 'complex' predicate element (or qualifier), is a special case of the generalized 'causal' law that the formation of any qualificative cognition is causally dependent upon the formation

[44] The reason for this alternative provision, since it is complex, cannot be explained here. See also Staal [Review of Matilal], for 'transformational' analysis of the Nyāya theory.

of a previously acquired cognitive state about the predicate element or qualifier. In the case of a 'simple' qualificative cognition (qualificative cognition of the first order as expressed in B) the supposed causal condition cannot be called another qualificative cognition or judgment because the qualifier in B (that is, the predicate element in B) is a non-complex (that is, 'simple' roughly in the sense described in section 7) entity.

It is difficult to construct a definition of the class of 'simple' or fundamental properties or 'primitives'. The Navya-nyāya system seems to presuppose a class of 'simple' properties or 'primitives' which are not further analysable. We have tried roughly to explain the notion of 'simple' properties in connection with the generic properties. Let me now attempt here to throw some more light on this rather important notion of 'simple' properties.

A 'simple' property is always real in the sense that it is either (1) separately existent over and above the fact that it has a real 'sub-stratum' or (2) it merely has a real substratum which it is supposed to characterize. The implication is that in the second case the 'simple' property may not be existent INDEPENDENTLY of the substratum. A generic property like 'cowness' is a simple property in the first sense. Both cowness and a cow individual are regarded as separate entities by the Nyāya, and the probable reason of the Naiyāyikas for this reification of 'cowness' has been discussed already (section 7).

A 'simple' property cannot be analysed into other properties or property-components. In other words, it cannot have any constituent properties. The whole world is composed of these 'simples' and hence can be theoretically analysed into them.

An unanalysable 'imposed' property (viz., *upādhi*) like sky-ness is regarded as a simple property in the second sense. Sky-ness is not separately existent but it is supposed to characterize the sky, which is, however, an independent entity, that is, existent, according to Nyāya. As we shall see later (chapter 4, section 4.8), Nyāya believes that no 'simple' property can be EMPTY or fictitious in the sense that it is not located in a real object or substratum. Only complex properties, which are made out of the simple ones, can sometimes be such that they are not to be found in any real object or substratum.

How can the idea of the SIMPLE be justified or proven or established? One answer is that only a 'simple' property or a 'simple' object can appear as such in a cognitive state without needing a further qualifier to qualify it. Thus, a non-qualificative perception is the perception of

the SIMPLE. (Compare this with Diṅnāga's perception of the bare particulars, the reals.) There are, however, some exceptional cases where even a SIMPLE property appears as qualified by something, that is, some other property (see below).

In any case, Gaṅgeśa says that in order to have a perceptual judgment of the type expressed in B above, we need before it a 'simple awareness' or a non-qualificative cognition of the qualifier tree-ness. If we cannot have such an ATOMIC cognition of the simple property, tree-ness, we cannot form a perceptual judgment of the form 'this is a tree'.

It is to be noted that Gaṅgeśa does not reject entirely the idea of a simple perception or awareness of the 'undifferentiated whole' (which is called *ālocana*) where all the factors of the later judgment are present. Psychologically this is a possibility though it remains indistinguishable from the VAGUE awareness of un-ordered data. What is logically necessary, however, is the non-qualificative cognition (perhaps we should say 'conception') of only the qualifier or the immediate predicate element, and this may or may not form a part of our vague awareness of the 'undifferentiated whole'. This non-qualificative perception of the qualifier is, according to Gaṅgeśa, as much intractable to being telescoped by our reflective awareness as would be the so-called simple apprehension of the undifferentiated whole. But there is at least some logical necessity for admitting the non-qualificative perception of the qualifier. For example, there is, as Gaṅgeśa says, the 'causal argument', which we have stated above.

Gaṅgeśa asserts with significant boldness that not all our cognitive states are necessarily revealed by our reflective awareness. This answers at the same time the charge of infinite regress brought against the non-self-illumination theory of cognition. It also resolves the apparent oddity that the non-qualificative perception, although it is claimed by Nyāya to be a cognitive state, is seldom revealed in our reflective awareness.

It may be argued that the main qualifier in a qualificative cognition can have a further qualifier by which it itself is qualified. Gaṅgeśa says that it is quite possible for each qualifier to be further qualified by another qualifier but his point is that not every qualifier APPEARS in a particular qualificative cognition as being qualified by a further qualifier. In other words, there are cases where a qualifier appears as such, that is, unqualified by anything.[45]

[45] Gaṅgeśa, Part I, p. 820.

We may sum up the Navya-nyāya observations on perception and language as follows:

(a) It is the nature of the verbalized form of our cognitive act that when we express an entity by an EXPLICIT word or expression, we invariably qualify that entity with some qualifier or other. (This has a significant bearing upon 'philosophical semantics'. Compare Proto-Vyāḍi theory: The word designates the 'substance', the thing, through some 'property' which is called its 'ground for application'; chapter 3.)

(b) Each cognitive state that can be verbalized has a unique verbalization.

(c) A constituent of the content of a cognitive state is generally represented by some element of its verbalized form.

(d) When an entity appears either as a qualifier or as a qualificand in a cognitive state, it itself cannot appear without being further qualified by some other property. Thus, in the verbalized form when a word designates such an entity it does so with the help of some property or other. When an entity is designated by *the pot* it appears in the cognitive state as qualified by potness.

(e) Exception to (d): A 'primitive' or a 'simple' or fundamental property like a generic property (*jāti*) or an unanalysable imposed property (*akhaṇḍopādhi*) can appear as a qualifier in a cognitive state without being further qualified by some property or qualifier. When *potness* appears as a qualifier in a cognitive state it does not need to be further qualified.

(f) In the verbalized form of a cognitive state, this 'unqualified' qualifier is not *explicitly* represented. In other words, we do not use the corresponding word to express this type of qualifier in the verbalized form, but we use such words to name or describe the thing that is supposed to possess the qualifier as would implicitly present this qualifier. Thus, when *potness* is presented as the 'unqualified' qualifier in a cognitive state we have to use the word 'pot' in our verbalised form.

(g) If, however, in the verbalized form we use '*potness*' explicitly to designate potness, the qualifier, we have to conclude that *potness* did not appear in the corresponding cognitive state as an 'un-qualified' qualifier. It appeared, on the other hand, a qualifier which was further qualified—qualified, perhaps, by an imposed property called 'potness-ness'. We can derive, for example, an imposed property from such a designation as 'Potness is something that is present in all pots and only

pots' and say that potness is CHARACTERIZED by the property of being present in all and only pot-individuals. Let us call this property p1. Notice that p1 differs from potness in at least two important respects: (1) p_1 is analysable but potness is unanalysable, and (2) p_1 is different with respect to each pot, but potness is unitary, the same in each pot.

(h) An 'unqualified' qualifier cannot be verbalized properly because no property (real or imagined) appears as qualifying it. An 'unqualified' BARE entity cannot be represented by a word because our use of a word always necessitates some qualification or condition (cf. 'the ground for application of the word'). It is however conceded that the 'unqualified' entity can be indirectly represented. (Compare Diṅnāga's position: a non-constructive perception is beyond verbalization. The bare particular can be experienced but cannot be expressed by our speech. Contrast with Bhartṛhari's position: verbalization is an essential factor of our cognitive states. See chapter 1.)

(i) The substratum, as long as it does not become the qualificand, that is, as long as it is not verbalized, may be said to appear in the perceptual state as such, that is, as unqualified. Inasmuch as it is grasped as an UNQUALIFIED object it becomes a 'simple' object. Thus, it is possible to have a non-qualificative perception of THE THING although occurrence of such a non-qualificative perception of the bare thing is not necessary for the occurrence of the judgmental perception of the next moment. When Kumārila emphasizes that in our non-constructive perception we are aware of the 'barely existent' (*mahāsattā*), it may be that he wants to refer to our non-qualificative perception of the bare thing in the manner just described. But Kumārila also goes on to develop the more comprehensive idea of *ālocana*, 'the simple perception of the undifferentiated whole'. (See further Matilal [2002], Vol. 1, essay 9.)

(j) Another interesting point about the non-qualificative perception (as it is conceived in *Navya-nyāya*) is that it is neither true nor false. According to Gaṅgeśa, the non-qualificative cognition is beyond our assignment of any truth-value. This is not at all surprising because truth-values are assignable only to judgmental or propositional cognitive states. There is no way of our being right or wrong if we do not make connection between two elements as we do in a judgment. The Nyāya concept of truth consists in our CORRECT predication or ascription. A non-qualificative cognition does not involve any qualification or predication and hence can neither be true nor false.[46]

[46] Gaṅgeśa, Part I, pp. 801–2.

It is clear that under a different notion of truth or falsity it might be relevant to ask whether a non-qualificative cognition is true or false. For Diṅnāga, a non-constructive cognition is always true, that is, non-fictional, though some of Diṅnāga's followers differ from Diṅnāga in this respect (see the controversy over the adjective (*abhrānta*) 'non-erroneous'; chapter 1). There is an important principle implicit in the *Navya-nyāya* claim that a non-qualificative cognition is neither true nor false. One may ask: When we have a non-qualificative cognition of something *x* and this *x* is actually non-existent or unreal like the rabbit's horn, might it not be in order to assign falsity to such a non-qualificative cognition? The question is related to another, and, perhaps, more interesting question: How do we refer to, as we seemingly do, a non-existent entity? We shall discuss this point in chapter 4.

2.10. TERMS AND PROPOSITIONAL ASSERTIONS

I would like to take this opportunity to clarify an often confused point about the *Navya-nyāya* analysis of qualificative cognitions. My previous interpretation of the *Navya-nyāya* analysis of qualificative cognition (see Matilal [1968], pp. 13–15) might have been somewhat inadequate or unclear so as to evoke a criticism that Navya-nyāya is, perhaps, guilty of confusing terms with propositions.[47] This critique, as far as I can judge, is based upon two factors: (a) a possible construal of the symbolic notation I have used to represent the *Navya-nyāya* analysis, and (b) an assumption that the sharp distinction made in medieval (classical) Western logic between what counts as a term and what counts as a proposition is also applicable to the *Navya-nyāya* analysis.

To take the second point first: A proposition or judgment is understood in medieval Western logic to mean a statement in which something is ASSERTED about something else. A proposition, in its simplest form, has three constituents: (i) that of which something is asserted, called the subject; (ii) that which is asserted of the subject, called the predicate; and (iii) the copula, which unites the subject and the predicate. The term which expresses the subject is called the subject term, that which expresses the predicate is called the predicate term. And a proposition is regarded as a combination of these two terms. A term in medieval Western logic is understood to mean an 'idea', that is, a

[47] J.F. Staal [Review of Matilal].

product of human consciousness, standing as the representative of an object, or of the properties of an object.

But G. Frege has argued that the separation of the act from the subject matter of a judgment is necessary in order that we may be able to express a mere supposition.[48] Thus, he has introduced a distinction between the content of a proposition or judgment and what we do with it: assert it, suppose it, etc. This unasserted content is what Frege calls a 'thought', which is 'a mere complex of ideas', something which produces in us only the idea of a state of affairs. And thus, Frege proposes to split a proposition into a content and an assertion sign.[49]

What I have done in my [1968] is to take some liberty with Frege's method of analysis and propose that if we take the assertion sign out, the content of the proposition is reduced to a COMPLEX of terms representing a state of affairs. A state of affairs may be considered a 'complex' object. And a 'complex' object may be capable of being perceived. When it is perceived, it is perceived, as B. Russell said succinctly, as one object.[50]

My main concern in chapters 2 and 3 of my [1968] was to expose the structure of a qualificative cognition (as is obvious from the titles of the said chapters). Thus, I had no intention of representing the ASSERTION element in my symbolic notation. But admittedly, my notation system could be construed in such a way as to sometimes generate nonsense as Staal has pointed out. And such a construal of the said notation I would urge my readers to avoid.

A qualificative perception (or a cognition, in general) can be verbalized under the Nyāya theory as I have noted above. And this verbalization may take the form of a single word, for example, *ghaṭaḥ* 'the pot', expressing a term (in the sense noted above), or a word-complex or phrase *nīlo ghaṭaḥ* 'the blue pot', expressing a complex term, or a sentence 'The pot is blue', expressing a proposition. In all these forms, only the last one involves an assertion, and if we disregard the assertion element the last will be indistinguishable from the second as far as their contents are concerned. Navya-nyāya disregards the assertion element in such cases (and J.F. Staal is right in assuming that my interpretation is influenced by the *Navya-nyāya* approach to the problem).

But I think Navya-nyāya disregards the assertion element in such

[48] G. Frege (Geach and Black), pp. 1–2.

[49] G. Frege (Geach and Black), p. 34, also p. 156.

[50] B. Russell [1925], p. 43.

contexts for good reasons. Navya-nyāya is not concerned here with the analysis of the verbalized forms of the cognitive states, viz., sentences, etc., but with the analysis of the cognitive states themselves. When a cognitive state is verbalized in the form of a sentence in a natural language, the assertion element usually comes along with it. A sentence does not designate anything, as Frege would say, but it asserts something. A *Gedanke* or 'thought', according to Frege, is a 'composite name' by which we can refer to a state of affairs. One may also claim that a sentence certainly makes an assertion and this assertion element cannot be taken out of it but it is contained in the content. Thus, L. Wittgenstein has criticized Frege and Russell, claiming that the so-called assertion sign is 'logically quite meaningless'.[51] But discussion of the relative merit of Frege's theory and Wittgenstein's critique of this theory is beyond the scope of the present essay.

Navya-nyāya is not quite blind to the assertion element in a sentence. It is frequently mentioned in the Navya-nyāya discussion of the relation of 'contradiction' (*virodha*) between two propositions that it is the asserted content of the DETERMINATE cognitive state (cf. *niścaya*) that contradicts another cognitive state. For example, if one asserts 'There is fire on the mountain' one cannot assert 'There is no fire on the mountain', nor can one have a 'dubiety' (*saṃśaya*) of the form 'Perhaps there is fire on the mountain, perhaps there is not'.[52]

That all qualificative cognitions (as they are conceived in Navya-nyāya) do not involve assertions can easily be shown by citing the case of 'dubiety' (*saṃśaya*) as a counterexample. A doubt or dubiety is also a qualificative cognition (and a perceptual doubt is a qualificative perception) whose content may be represented by my notational system as follows: The content of the doubt mentioned in the last paragraph can be written as:

$$Q(ab) \ \& \ Q(a\bar{b})\text{' or, simply '}Q((ab)\bar{b})$$

where '*b*' and '*b*' stand for the presence and absence of fire respectively. Short of conceding a contradictory assertion, one cannot say that the said dubiety represents a proposition, assertion of what is contained

[51] L. Wittgenstein, *Tractatus*, 4.442; also 3.143 and 5.02.

[52] For such interesting discussion on the notion of 'contradiction' (*virodha*) between propositional assertions, see Raghunātha's commentary on the *Pakṣatā* section of Gaṅgeśa's *Tattvacinatāmaṇi*, and Jagadīśa's sub-commentary on the same.

in its content. It would be absurd to write this dubiety in the notation of propositional assertion as

$$Q\,(a,b)\ \&\ \mathrm{Q}\,(a\bar{b})$$

because this will be read as '*a*' is qualified by the presence of *b* and also by the absence of '*b*'.

This brings me to my second remark (above) about the criticism of the notational system I have used in my earlier writings. The notation *Q*(*xy*) stands always for complex of terms and not for a proposition (see Matilal [1966], p. 386n). Hence it may be read as '*x* which is qualified by *y*' and not as '*x* is qualified by *y*'. That is why '*Q*(*xy*)' is also substitutable for either of the two elements '*a*' and '*b*' in '*Q*(*ab*)' according to my notational system (see ibid., pp. 387–8). Thus the notation

Q(*Q*([Pot Potness]*Q*[Blue-colour Blueness])

would not appear as meaningless under my reading, which is 'The pot which is qualified by potness and by blue-colour, which (blue-coluor) is, in its turn, qualified by blue-ness'.

Admittedly the above is a cumbrous expression in English (and it would be almost similarly cumbrous in Sanskrit). But this seems unavoidable because we are trying here to expose the structure of the content of a cognitive state. The usual verbalization of this cognitive state, however, is quite simple and innocent-looking, viz., 'The pot is blue', although it involves an assertion element which cannot be easily separated from it. Some verbalizations of qualificative cognitions do not involve an explicit assertion, for example, 'the pot', but the content of such a cognitive state is at any rate a complex term which can be represented as 'the pot which is qualified by potness'. And a non-qualificative cognitive state does not have any proper verbalization although its content can be given as 'potness' or 'pot'. Although we cannot avoid using words to indicate the content of such a non-qualificative cognition, we should not take these words to be ordinary words expressing an entity through some property because the content of such a non-qualificative cognition is, as has been repeatedly emphasized, inexpressible.

Thus, I have shown that at least in this context Navya-nyāya did not confuse between terms and propositions. And my notation system, insofar as it tries to interpret the *Navya-nyāya* method of analysis, does justice to it. In fact, not only Navya-nyāya but Indian logicians in gene-

ral (from the time of Diṅnāga) were quite aware, when they propounded their theory of inference, of the distinction between terms and propositional assertions. The fundamental division of inference into 'inference for one's own sake' (*svārthānumāna*) and 'inference for the sake of others' (*parārthānumāna*) is based upon the basic distinction of terms and propositional assertions. When we infer for ourselves we are proceeding from one term-complex to another. But when we are inferring for others, that is, demonstrating the process of inference to others, we are dealing with propositional assertions. This is a very general statement about the Indian theory of inference. Proper elaboration and justification of this remark will be reserved for a future occasion.

It is clear, however, that Staal's critique of *Navya-nyāya* points to the direction of a genuine philosophic confusion—a problem in regard to which even modern philosophers like Frege and Wittgenstein seem to differ from each other. What I have tried to show above is that the Nyāya analysis, in this particular context, is somewhat Fregean in spirit and hence may very well be subjected to criticism, as Frege's procedure has obviously been.

My notional system (as an interpretation of *Navya-nyāya*) can also be criticized from another point of view, and perhaps, rightly so. (See Mohanty's review of Matilal [1968].) However, an improved version of this exploratory notational system can easily answer the objections, as has already been indicated.

3
Early Grammarians on Philosophical Semantics

CHRONOLOGICAL NOTE: The Pāṇinian system of grammar is often described as the joint work of the 'three sages' (*trimuni*). Pāṇini, Kātyāyana, and Patañjali must have flourished between 500 BC and 100 BC. Vājapyāyana and Vyāḍi should be placed between Pāṇini and Kātyāyana. We get an account of the semantic theories of Vājapyāyana and Vyāḍi in the work of Kātyāyana. Some traditions declare Pāṇini, Vyāḍi, and Kātyāyana as contemporaries.

For Bhartṛhari, see Chronological note, chap. 1.

Helārāja wrote a commentary on Bhartṛhari's *Vākyapadīya*. He belonged to the tenth century AD. He is supposed to be one of the teachers of Abhinavagupta. The *Kāśikā* was probably written by two different persons, Jayāditya and Vāmana. They must be placed in AD 600–700. Kaiyaṭa's date is uncertain. But he must have written his commentary on Patañjali's *Mahābhāṣya* at the beginning of the eleventh century AD. (See Belvalkar, pp. 41–3.) Nāgeśa or Nāgojibhaṭṭa flourished in the eighteenth century AD.

3.1. PRELIMINARY REMARKS

It has sometimes been asserted by scholars that the system of the Vaiśe-ṣika categories of substance, quality, and action was much influenced by the grammatical categories of the Sanskrit language.[1] Broadly speaking, there is some truth in this assertion. But careful research showing the interconnection of grammatical categories with the Vaiśeṣika categories has not yet been undertaken. The present chapter is not meant to fill this gap. But I will examine here how the Sanskrit grammarians explained the notion of 'substance' (*dravya*) as well as the notion of 'quality' (*guṇa*) in ancient texts. It will be instructive to see

[1] B. Faddegon, pp. 108–10.

also how the Vaiśeṣika notion of substance and quality compares with the grammarians' notion of them.

Our main concern, however, is to note the gradual awareness of the principles of philosophical semantics in the writings of the ancient grammarians. The notion of 'substance' and 'quality' will thus be studied only insofar as they are relevant to the theory of meaning. The materials used here are derived largely from the works of Patañjali and Bhartṛhari. The Vaiśeṣika notion of category (*padārtha*) will not be discussed here but will be simply referred to. The required knowledge of the motion of substance in the Vaiśeṣika system may be gathered from Matilal [1985], chap. 4.

It is necessary to present the discussion of certain grammatical rules of Pāṇini's *Aṣṭādhyāyī* as a prologue to the actual discussion of the implicit theories of meaning. It will be clear at the end of this chapter that some important principles of philosophical semantics were presupposed by the formation of certain grammatical rules and the remarks of some early grammarians throw light upon these principles. Thus, an attempt will be made to make these implicit principles explicit as far as we can in modern terminology.

3.2. THE NOTION OF 'SUBSTANCE': PĀṆINI'S RULE 1.2.64

The two terms *dravya* 'substance' and *guṇa* 'quality' have, in fact, been used in various senses on different occasions in Pāṇini's grammar. But we shall concern ourselves here only with what may be called the chief senses of these two terms. It will later be clear that one important sense of the term 'substance' carries an ontological significance.

Both Pāṇini and Kātyāyana implicitly made use of certain categories like substance, quality, and time, while they were developing their grammatical theories. Bhartṛhari has accordingly noted that the nature of these categories can be inferred from an analysis of the context of the statements (of Pāṇini and Kātyāyana) where such terms have been used.[2] His commentator Helārāja adds that in order to understand the grammarians' notion of 'substance' (*dravya*) and its significance in their philosophical semantics it is necessary to analyse Pāṇini's rule prescribing *ekaśeṣa* (*Sūtra* 1.2.64).

[2] *Vākyapadīya*, Book III, chap. iv, verses 1 and 2. See also Helārāja's commentary.

Ekaśeṣa (literally, 'one-remainder') is a grammatical operation of the Sanskrit language by which two or more words (sound-sequences) referring to two or more things or substances are reduced to one word (dual or plural inflection being added as the case may be). This operation not only covers the cases of general names like TREE (each use of which may presumably refer to individual tree) and the cases of homonyms but also extends to many other cases.[3]

According to Kātyāyana, it is important to note here that the prescription of this *ekaśeṣa* operation by Pāṇini might have been motivated by the idea that normally we should utter or use words separately in order to designate separate things or individuals. One may notice that if we maintain a binary relationship between a word-utterance and the thing expressed by it then our primitive theory of language will be looking for a situation where each word-utterance will refer to an individual object. To be precise, each nominal word under this theory should be treated as a proper name or a singular term referring to or designating one individual or 'substance' at a time. Thus, the first utterance of the word *vṛkṣa* 'tree' designate a particular tree, another utterance of *vṛkṣa* 'tree' designates another tree, and a third utterance a third. Here let us assume that tree 1, tree 2, and tree 3 are all different individuals as far as the particular substantial stuff is concerned. To put it strongly, this theory maintains that we may combine utterances, u_1 of X referring to thing T_1, u_2 of X referring to T_2 and u_3 of X referring to T_3 into 'one' word utterance u of X only for our practical convenience, but we should not forget that there are three distinct entities referred to here and to indicate this fact dual or plural suffixes will be used.

The philosophical point we can extract from this theory is, according to Helārāja, that the substance is that which is distinguishable (*bhedya*) by our individual utterance of words. In the absence of the *ekaśeṣa* operation people would have used two or more *tree* word-utterances, for example, to express the individual *substances* of two or more trees.

Those who oppose the grammatical operation *ekaśeṣa* argue that the single utterance of one word may very well designate two or more things. If the single utterance of one word can NATURALLY designate two or more objects then Pāṇini's prescription of *ekaśeṣa* would be

[3] Pāṇini 1.2.64 and several *sūtras* following 1.2.64. For example, words like '*pādāḥ*' (in plural) is formed as a combination of three different words, *pāda* foot, *pāda* = quarter of a verse, and *pāda* = one-quarter. *Pitarau* 'parents' combines *pitṛ* 'father' and *mātṛ* 'mother' and is formed by the special rule of Pāṇini 1.2.70. See also Matilal [2002], vol. 1, essay 19. There may be alternative explanations of 1.2.64; the one I have chosen is the one to the issue of philosophical semantics.

pointless. But, if the power to designate more objects is not natural (*svābhāvika*) to the utterance of one word then, of course, this operation has a point, viz., that of indicating that the same word utterance may designate many objects. The opponent, however, argues that one may try to designate many objects by uttering a single word but the hearer will not be able to understand those objects unless this practice is a commonplace among the users of the language and thus intersubjectively valid. And if this is such a commonplace, we do not need a special prescription of the grammatical operation *ekaśeṣa*.

In fact the controversy over the justifiability of the *ekaśeṣa* prescription is related to the philosophical controversy over the import of words. Two grammarians, Vyāḍi and Vājapyāyana, who must have flourished between Pāṇini and Kātyāyana, maintained two different positions with regard to the import of words. The view of the former is that words refer to *dravya* 'substance' or 'individual' while that of the latter is that words (including even proper names) refer to *jāti* 'universal' or 'attribute'. Thus, according to the latter view, the prescription of *ekaśeṣa* is useless because a tree-universal is, after all, one and we do not need to utter may *tree* words to designate it. The grammatical numbers (singular, dual or plural suffixes) will express, under this theory, the number of loci or substrata where the universal or the attribute resides. According to the former view, however, the *ekaśeṣa* operation is necessary because otherwise one would have uttered different *tree* words to designate different tree-substances (that is, tree-particulars).

3.3. 'SUBSTANCE' AND 'QUALITY': PĀṆINI'S RULE 5.1.119

The general concept of quality was assumed by Kātyāyana when he explained the rule 5.1.119 of Pāṇini by saying that suffixes like '*-tva*' and '*-tā*' were expressive of quality (*guṇa*). Suffixes '*-tva*' and '*-tā*' are comparable to English abstract suffixes like '-ness' and '-ity'. According to Kātyāyana, if *y* is a quality which is possessed by a substance *A* and if, because of *A*'s possession of *y*, *A* is expressed by the word '*X*', then the word '*X-tva*' or '*X-tā*' (comparable to '*X*-ness' in English) will denote the quality *y*. This statement of Kātyāyana presupposes, according to Helārāja,[4] the definition of quality as that which is dependent on some substance as its substratum.

[4] Helārāja, p. 185.

Patañjali develops the concept of substance and quality in the following manner. By quality, Patañjali means primarily the sensory qualities like sound, taste, colour, touch, and smell. Substance, according to him, is what is different from these qualities. It may be objected that we do not experience anything over and above these sensory qualities. If, for example, we cut an animal (that is, so-called substance) into a million pieces we do not find or experience anything apart from these sensory qualities. Thus, the concept of substance as something different from qualities is just a 'linguistic' construction.

This argument is in a way reminiscent of the later Buddhist critique construction of the doctrine of substance. Patañjali answers this objection by saying that substance is not something which we can perceive, but we can prove its existence through inference. The kind of inference Patañjali uses to prove the existence of substance is called *sāmānyato-dṛṣṭa*, according to the terminology of ancient Indian logic.[5] Briefly we can describe this type of inference as a method by which we come to know the existence of an unperceived or even an imperceptible object or event through parity of reasoning, induction and analogy. Thus, the growth and decay of trees and plants are inferable from the gradual changes in their sizes, that is, expansion and contraction of their bodies. A better example would be the inference of the movement of the sun, stars, and planets. The movement of the heavenly bodies is not visible to our eyes, but seeing their positions and displacements at different times, we can infer their movement. The analogy which works behind this inference is this: we do see that displacements and different positions of human bodies or earthly bodies result from their respective movements, and we believe that the same law must hold in the case of heavenly bodies.[6] Incidentally, Patañjali's explanation of this type of inference must be one of the earliest in the

[5] *Nyāyasūtra* 1.1.5 mentions three types of inference: *pūrvavat, śeṣavat,* and *sāmānyato-dṛṣṭa.* Opinions vary regarding the exact significance of this classification. For a study of this problem see G. Oberhammer [1966], pp. 66–72. I made some comments on this point in a paper, 'On the interpretation of *Nyāyasūtras* 1.1.5 and 2.1.37–8', presented to the XXVII International Congress of Orientalists (Ann Arbor, Michigan, 1967). See Matilal [1985].

[6] Astronomy tells us that the earth goes round the sun. But here we are concerned with the commonplace inference of motion. We may substitute 'motion' in this context by 'relative motion'. In the case of planets such substitution is not even necessary. Another word of caution comes from Nāgeśa: Here we have to neglect the philosophical view which says that all types of motion lie beyond the scope of sense perception. See Nāgeśa [1], Vol. IV, p. 86.

history of Indian logic and hence also interesting from that point of view. By calling it analogy, I am not downplaying its logical importance as an inference. In fact, such inferences are indispensible for acquiring knowledge.

In order to infer the existence of substance, Patañjali wants us to proceed as follows.[7] If we take an iron bar and a cotton-wool pad of identical size and shape, and weigh them, we see that the weight of the one is quite different from that of the other. What accounts for this difference in weight should be called 'substance', the stuff of which it is made. In other words, iron and cotton are two different substances and as a result they have two different weights. Patañjali also claims that we can distinguish the substance of one from the substance of another object with reference to their behaviour under similar circumstances. Thus, one object, viz., a sword, cuts our body as soon as it touches while another object, viz., a cotton garment, does not behave in the same way under similar conditions. Some object (say, a hammer) can break a body by a single stroke while another object (say, a cotton type) cannot break it even after second or the third stroke. This difference in behaviours of objects should be due to the fact that they are made of different substances.

The above argument of Patañjali for the existence of substance has many flaws. It may be asked why a difference in behaviour or even in other properties should be construed as indicating the existence of substance. It is equally tenable that only sensory qualities or other qualities of the object concerned are responsible for their different behaviour under similar conditions. Perhaps what Patañjali meant here by substance was what might be called the *svabhāva* 'own nature' or 'unique nature' of objects. This would be something which is unique to each object and consequently accounts for its peculiarities. Later commentators like Kaiyaṭa were much influenced by the Vaiśeṣika notion of substance and hence tried to explain this passage of the *Mahābhāṣya* following the Vaiśeṣika definition of substance as the substratum of qualities.[8]

Patañjali's second attempt to define substance can be stated as follows: Substance is the unchanging state of objects. Qualities emerge

[7] Kaiyaṭa comments that although substance is perceptible according to some philosophers, Patañjali is assuming the position of those who would deny the perceptibility of substance. This is, in fact, consistent with Vyāḍi's view as we shall see later.

[8] Kaiyaṭa, Vol. IV, p. 87.

and disappear in order to make room for new qualities. What stays permanent amid all changes is what is called substance. It is the *tattva* 'essence' of an entity. Thus, a mango fruit becomes green at one time and yellow or red at another time, but it still remains the same mango or, at least, we can call it 'the same mango'. What remains unchanging is the mango-essence, the mango-substance. This seems to be a more sophisticated attempt to establish substance as the permanent core of things. His critics, however, could say that our use of 'the same mango' is just an uncritical convention of language, because the 'thing' (whatever it may be) should not be regarded as the same when qualities emerge and disappear. There is also the Buddhist position which maintains that there are only qualities or properties (*dharma*), which are also ever changing but there is no substratum, no inner core, no substance.

The third attempt of Patañjali to define substance was perhaps more successful. A substance is a bundle of qualities, an integration of qualities. As Nāgeśa points out, this notion of substance has been referred to by Patañjali not only here but also in some other places (viz., Pāṇini's rules 4.1.3 and 5.2.42). The implication is that the integrated whole or the 'bundle' should be conceived as different from the constituent parts. This is consistent with the original assertion of Patañjali that substance is something different from quality.

Nāgeśa[9] suggests that the notion of substance as the cluster or 'bundle' of qualities is acceptable in the philosophical school of Sanskrit grammar and the previous two attempts of Patañjali (given above) at explicating the notion of substance are to be explained accordingly. Under Pāṇini's rule 4.1.3, Patañjali says that the feminine gender (*strītva*) is a quality belongs to the substance which is to be defined as a cluster (*samudāya*) of qualities. Similarly under Pāṇini's rule 5.2.42, Patañjali notes that 'whole' as opposed to a 'part' refers to the cluster of qualities and/or parts. In fact, 'quality' (as Nāgeśa explains) is a blanket term which denotes both properties (*dharma*) and parts (*avayava*). Nāgeśa is critical of Kaiyaṭa's explanation of the *Mahābhāṣya* passages under Pāṇini's rule 5.1.119 and says that Kaiyaṭa uses the Vaiśeṣika notion of substance to explain Patañjali. Nāgeśa, on the other hand, thinks that the Sāṃkhya-Yoga notion of substance is much closer to the grammarians' notion of substance.[10] He also quotes from the

[9] Nāgeśa [2], p. 347.

[10] There is striking similarity between Patañjali's definition of substance and the Sāṃkhya-Yoga idea of substance. For the Jain source, see Mallavādin, p. 303. This point is also relevant to the problem of identity of the two Patañjalis,

Yogabhāṣya of Vyāsadeva where Patañjali has been cited as holding the view that substance is a collection of parts and qualities which are inseparably (*ayutasiddha*) bundled together. Nāgeśa, in fact, gives a somewhat syncretic definition of substance which covers both the Vaiśeṣika notion and the Sāṃkhya-Yoga notion. But this definition need not concern us here.

One should note that even under Pāṇini's rule 4.1.3 Patañjali goes on to mention a different notion of substance. He cites two counter-examples (cf. *cikīrṣā* and *gotā*) which cannot be explained if one accepts the view that substance is a cluster and feminine gender (*strītva*) as a quality belongs to it. Kaiyaṭa points out that these examples can be explained under a different notion of substance which Bhartṛhari has tried to develop in his *Vākyapadīya*. (We will discuss Bhartṛhari's definition of substance in section 5.)

The Vaiśeṣika notion of substance is slightly different from that of Patañjali. It may sound like a philosophical mystification to say that a collection is different from the collected elements. But it is also undeniable that each element, taken individually, is not what a collection is meant to be. In the Vaiśeṣika system of categories, qualities, actions, and even generic properties (universals) are supposed to be occurrent in substance, and the substance is said to be the substratum of these properties. Moreover, these properties are also tied to the substance by a REAL relation which is called the relation of inherence (*samavāya*). Thus, what is called substance is, in the *Vaiśeṣika* school, not a 'bundle' or a collection, but a systematic whole having a theoretical structure of its own. It is a real entity, and *ex hypothesi* not dependent upon qualities, etc. Rather, qualities, etc. are said to be dependent upon substance for their existence. But, according to Patañjali's theory, one may say that the notion of quality is primary. A collection depends upon the collected elements, and hence a substance, being a bundle of qualities, depends upon the latter. As far as I can see, Kaiyaṭa, in his commentary, has not paid much attention to this subtle distinction between the Vaiśeṣika concept of substance and Patañjali's notion of substance (Nāgeśa has in fact criticized Kaiyaṭa on this ground). Patañjali's explanation of substance is much closer to the Sāṃkhya-Yoga

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the author of the *Mahābhāṣya* and the author of the *Yoga-sūtras*. See S. Dasgupta, Vol. I, pp. 231–3. For a brief survey of the controversy over the identity of the two Patañjalis, see P.V. Kane, Vol. V, Part II, pp. 1395–9. Vyāsadeva, perhaps, believed in the identity of the two Patañjalis.

notion of substance. This has been made clear by Nāgeśa's interpretation.

It may also be noted that Patañjali wrote his *Mahābhāṣya* at a time when the Vaiśeṣika theories were on the eve of being strictly systematized. Thus it is not always clear precisely what elements in Patañjali's writings belong to the Vaiśeṣika school proper. However, the idea of substance as the 'substratum' of qualities need not be regarded as typical of the Vaiśeṣika school. Evidence from ordinary language shows that most language users tacitly, and perhaps uncritically, assume that the substance is the substratum of qualities. Thus, it is in order for grammarians like Kaiyaṭa to explain certain grammatical operations taking recourse to the popular idea of substance. The Vaiśeṣika concept of substance, on the other hand, is more or less a theoretical construct and imbedded in the Vaiśeṣika system of ontological categories (*padārtha*).

3.4. TWO ASPECTS OF MEANING: VYĀḌI AND VĀJAPYĀYANA

Under Pāṇini's rule 2.1.1, Kātyāyana and Patañjali have raised certain interesting points relevant to our discussion. Here again we will be concerned with the philosophic differences between the view of Vyāḍi and that of Vājapyāyana with regard to import of words and sentences. Our discussion will touch upon one of the most interesting features of the Sanskrit language, viz., nominal compounds (*samāsa*). The phrase *vīraḥ puruṣaḥ* 'a man who is brave' gives us by the process of nominal compounding the following one compound word *vīra-puruṣaḥ* 'a brave-man', according to Pāṇini's rule 2.1.58. But the general rule for compounding words in Sanskrit is that we can compound only those words the meanings of which will be compatible and related to each other in such a way that there will be a single combined meaning (cf. *ekārthībhāva*) to be derived from the compound word. This is implied by Pāṇini's rule 2.1.1. (Similarly, a sentence is distinguished from a word-cluster.)

I have said earlier that according to Vyāḍi, words primarily refer to or express substances or particular things while according to Vājapyāyana, they express universal concepts or attributes. The word *dravya* 'substance' in this context clearly means the individual or the particular thing. (Compare Vātsyāyana's remark under *Nyāyasūtra* 2.2.61; *dravya* 'substance' and *vyakti* 'individual' are synonymous terms.) Patañjali

has reported elaborately on the controversy between Vyāḍi and Vājapyāyana under Pāṇini's rule 1.2.64.[11] In his conciliatory remarks, Patañjali notes that the meaning of a word has BOTH aspects; it has a universal aspect, a descriptive feature, an adjectival or attributive aspect, and it has a particularity, a substantial aspect or location. Vājapyāyana emphasized the first aspect while Vyāḍi emphasized the second.

One may note here that the word *guṇa* 'quality' is used in these contexts in a much broader sense so as to include *ākṛti* 'universal' of 'universal form'. Thus, a follower of Vājapyāyana finds very little difficulty in maintaining the position that a word primarily connotes a quality (the word's reference to the thing or the locus of that quality being secondary). Kaiyaṭa has said in his commentary on *Mahābhāṣya* under Pāṇini's rule 2.1.1: 'Some teachers hold that the meaning of a word is the substance, while others hold that it is the universal form. The word 'quality' implies also some universal form.' Kaiyaṭa then cites a statement of Kātyāyana to show that 'quality' can be used in the sense of universal identity form or attribute.

In a way, Vājapyāyana's theory can be called the 'quality' theory of meaning while Vyāḍi's theory can be called the 'substance' theory of meaning. This should not be confused with the well-known dispute between conceptualists and realists or between nominalists and realists. For one thing, the cow-substance referred to by the word 'cow' has not been treated here as a universal having an external reality. For another, quality, in both views, has not been regarded as more real, or even less real, than the substance. The controversy is more or less limited to the primacy of the 'quality' aspect of meaning over the 'substance' aspect of meaning, or, to use western terminology, primacy of connotation over denotation and vice versa. (See chapter 1, section 1.6 and chapter 2, section 2.5.)

We might add that Vājapyāyana was, perhaps, more concerned with law-like statements and the *Mīmāṃsā* formulas of the Scripture. Hence, he stressed the quality aspect (the generic aspect) of meaning, thus creating the philosophical background for the development of the notion of universal. But Vyāḍi was more concerned with the practical use of language and everyday speech behaviour. When, for example, we say 'Bring me a cow', we do not expect to be presented with a quality or universal, but we look forward to being presented with a particular cow. Vyāḍi also had greater linguistic insight. We may note that grammatical

[11] For modern expositions, see G. Shastri, pp. 136–71, and K. Kunjunni Raja, pp. 75–8. See also Śabara under *Mīmāṃsā-sūtra* 1.3.30–5.

categories like number, gender, and case-relations are more compatible with the substance-part of word meaning than with the quality-part.

To return to our consideration of the nominal compound *vīra-puruṣaḥ* 'a brave-man':[12] If we accept Vyāḍi's theory, both the words *vīraḥ*, 'brave' and *puruṣaḥ* 'man' would express the same particular, that is, the same substance. Thus, we cannot expect, in this case, to have compatibility or relatedness between the meanings of these two words (evidently, no distinction is made between sense and reference here; see section 3.7). A relation subsists between two different objects or facts, and under such circumstances we call them compatible and related. But it is meaningless, says the follower of Vājapyāyana, to assert that two identical things are compatible or related, that is, to say that a thing is related to itself. Moreover, if two words have identical meanings, it would be redundant to use both of them. Relation or compatibility implies difference and hence it is odd to treat identity as a relation. Thus, the possibility of the nominal compound *vīra-puruṣaḥ* 'a brave-man' will be ruled out due to the absence of relatedness or compatibility (*sāmarthya*). In this way we will not only violate Pāṇini's rule but also face the charge of tautology.

But, if we reject Vyāḍi and accept Vājapyāyana instead, we can easily explain the compatibility of meanings involved in this nominal compound. *Vīraḥ* 'brave' means primarily the quality of being brave and *puruṣaḥ* 'man' means primarily the quality of being a man. These two are different qualities but related to each other by being present in the same locus or substance, which is technically called the relation of co-occurrence (*sāmānādhikaraṇya*). Hence the two meanings are compatible, and this justifies the nominal compound *vīra-puruṣaḥ* 'a brave-man'.

The proponent of the Vyāḍi school can, in fact, answer this objection. The express meaning or reference of *vīraḥ* 'brave' is a man who possesses bravery. But there is an IMPLIED SENSE, or an implied ground for application, of the expression *vīraḥ* 'brave' (viz., the concept of being brave, the quality of being brave). In the terminology of Indian logic, the express meaning is called the *vācyārtha*, and the 'implied basis' is called the *pravṛttinimitta* 'the reason or ground for applying the word or the descriptive name'. In simple language, we call an object *x* 'brave' because *x* has the universal or quality bravery, and we call an object 'man' because it has the quality of being human. Kātyāyana

[12] For systematic translation of Patañjali's text under Pāṇini 2.1.1, see S.D. Joshi.

clearly holds the view that we apply a word to designate an object or substance because of the fact that it possesses some quality or other.[13] Thus, when we are not concerned with word-meanings in isolation, but are considering the syntactic relation of words in a phrase or a sentence, we can easily resort to their 'grounds for application' (*pravṛtti-nimitta*), if necessary. In fact, Pāṇini's mention of *samānādhikaraṇa* 'to be present in the same substratum' in the context of 2.1.58 should indicate that we are supposed to take the 'quality' aspect of meaning into account in the case of this type of nominal compounds.[14]

3.5. BHARTṚHARI'S DEFINITION OF 'SUBSTANCE'

The term *dravya* 'substance' in Bhartṛhari's system has a very special metaphysical sense—a sense with which we will not be concerned here. Bhartṛhari discusses this metaphysical sense of substance in the second chapter of the third book of his *Vākyapadīya*. Helārāja points out that the term 'substance' is used in two senses: (a) the ultimate reality or THE ultimate 'substance'—*pāramārthika-dravya*, and (b) the conventional or empirical substance—*sāṃvyayahārika-dravya*.[15] The ultimate substance is imperishable and is identical with what is called (by other philosophers) *ātman*, the existent, the nature or the reality. In fact, it is the true referent of all words. But the conventional notion of substance (as opposed to this metaphysical entity) has been defined by Bhartṛhari in the fourth chapter of the third book (*kāṇḍa*) of his *Vākyapadīya*.[16] It is this notion of substance that can be contrasted with the conventional notion of quality (which Bhartṛhari discusses in the next, that is, the fifth, chapter).

[13] In Vāmana-Jayāditya's *Kāśikā*, it is stated (under Pāṇini 5.1.119) that the 'reason' or 'ground' for application of a word is expressed by the word '*bhāva*' in Pāṇini.

[14] The expression '*samānādhikaraṇena*' occurs, in fact, in Pāṇini 2.1.49. By what is called *anuvṛtti* (i.e., the term is understood in all later sūtras) this expression ranges over all the sūtras from 2.1.49-2.1.72.

[15] Helārāja, p. 106.

[16] K.A. Subramania Iyer is doubtful whether chapter IV, called *Bhūyodravya-samuddeśa*, forms a separate chapter or not. Due to a rather misleading remark of Helārāja, he thinks, contrary to the whole of the manuscript tradition, that chapter IV is a part of chapter V, called *Guṇa-samuddeśa*. See Iyer, pp. xii–xiii. I think the manuscript tradition is quite in order. There is good philosophic justification for writing another chapter on *Dravya* 'Substance' apart from the second chapter (which is on the notion of metempirical substance).

Bhartṛhari proceeds to define the second notion of substance as follows: Substance is that which is referred to by the pronominal words like 'that' and 'this' and which is purported to be distinguished by virtue of its being expressed by some name or other. Helārāja makes the following comments on Bhartṛhari here: There are two types of pronouns. Some pronouns like 'everything', 'this', and 'that' range over our whole ontology (cf. *vastu-mātrābhidhāyinaḥ*). Other pronouns like 'another', and 'other than' are used in a comparative sense. Of these two groups, those belonging to the first are, according to Bhartṛhari, the basic media of reference to substance.

We can extract an important philosophical insight from this remark of Bhartṛhari. Any real entity will be called a substance in this system. To be a substance means, according to Bhartṛhari, to be in the range of reference of the first group of pronouns.[17] For example, 'this' refers to a substance (an entity) which is presented to our perceptual field, and 'that' refers to something which is absent from our perceptual field but whose existence can presumably be proved by some other means of knowledge (*pramāṇāntara*). Thus, 'this' and 'that' range, in fact, over the whole domain of entities, that is, substances, either perceived or unperceived.

It has been contended by Helārāja that the nature of each entity, that is, each substance, is so peculiar and specific that we cannot expect to arrive at any general characteristic possessed by all of them except that they are the objects of reference of the pronouns of our language. Helārāja goes on to quote Yāska, probably a pre-Pāṇinian linguist and philosopher of language, in order to support this definition of substance by Bhartṛhari.

The above definition of substance is based on a rather complex notion, the relation of reference. But Bhartṛhari approaches the problem of defining substance also from another point of view. Like Patañjali, he also regards substance as a relative concept being dependent upon our concept of quality (*guṇa*). A substance is that which is purported to be distinguished (*bhedya*), and a quality is that which distinguishes a substance (cf. *bhedaka* 'distinguisher'). On the authority of Helārāja,

[17] This is a very significant view about the function of pronouns in a natural language. Compare the remark of a modern Western philosopher, W.V. Quine 'To be assumed as an entity is, purely and simply, to be reckoned as the value of a variable. In terms of the categories of traditional grammar, this amounts roughly to saying that to be is to be in the range of reference of pronouns.' See Quine [1961], p. 13.

we may say that this exposition of the notion of substance is in accordance with the philosophical view of Vyāḍi.

The concept of substance, as expounded by Bhartṛhari, is, in fact, much wider than the popular concept of substance or even the Vaiśeṣika notion of substance. Anything that is denotable by a noun or a substantive becomes a substance under this theory. If we use a substantive word to express a universal concept or a generic property (*jāti*), it should be regarded as a substance inasmuch as it is intended to be distinguished by our use of the word in question. In fact, any nominalized expression can be said to refer to a substance since we can maintain that the expression itself, by virtue of its being used to designate the substance, qualifies, that is, distinguishes, the supposed substance.

The notion of substance comes very close to the notion of qualificand (*viśeṣya*), which has been explained and used by the Navya-nyāya writers in their analysis of 'propositional' cognition (*savikalpa-jñāna*).[18] Even verbs can be nominalized and be shown, under this theory, to refer to some substance. Thus, *cooking* would refer to the act of cooking and *walking* to the act of walking. And the act of cooking becomes a 'substance' as long as it is intended to be distinguished from the act of walking and vice versa.

Words like *red* and *blue*, when they are used as adjectives, refer to substances possessing those attributes. But when they are used as substantives, they refer to a red colour or a blue colour, and these well-known qualities can be treated as substances. Helārāja points out that under Vyāḍi's theory, compounds like *eka-rasa* 'one-taste' can be justified only by treating the well-known quality *rasa* 'taste' as a substance. The condition for this nominal compound in Sanskrit (see Pāṇini 2.1.49) is that the meanings of the two elements *eka* 'one' and *rasa* 'taste' must have the same substance as their locus. Here, the two universals *ekatva* 'one-ness' and *rasatva* 'taste-ness' reside in the same locus, taste (that is, a particular taste), which, therefore, should be treated as a substance according to Vyāḍi. The point seems to be this: we assume the substantiality, that is, reality, of an entity as long as we try to express it by a substantive word. (See also next section.)

In verse 1 of chapter V of the third book of the *Vākyapadīya*, Bhartṛhari proceeds to define *guṇa* 'quality'. This concept is dependent upon the concept of substance that we have just discussed. A quality is that which is intimately connected (*saṃsargin*) with a substance and

[18] See chap. 2, sec. 8.

differentiates that substance by delimiting its sphere. That a quality is conceived as the delimiting factor is reflected in our feeling that such expression as 'this is white' means 'it is white and not dark or some other colour'. Even cow-ness (*gotva*), a universal, is to be considered a quality since it distinguishes cow individuals from other individuals.

A quality becomes a quality insofar as it differentiates a substance; it does not become a quality merely because we think of it as qualified by another quality, nor does it become a quality when it is expressed as such by hypostasis. Helārāja explains that this is the significance of Bhartṛhari's expression '*savyāpāram*' in the verse.

Kaiyaṭa has quoted this verse of Bhartṛhari in his commentary on Patañjali's *Mahābhāṣya* (under Pāṇini 2.1.1). Nāgeśa, in his sub-commentary, explains this verse in a slightly different way. He reads the first two words of the verse as one compound word '*samsargibhedakam*' and explains that a quality is that which differentiates its locus or substratum. '*Savyāpāram*' is explained by Nāgeśa as follows: A quality is such that it invariably presents its substratum, and it is only by presenting its substratum that it enters into the domain of meaning. There is no fundamental difference between these two interpretations of quality. In fact, they emphasize two different aspects of Vyāḍi's theory. Helārāja points out that a quality may easily be hypostatized into a substance, according to Vyāḍi. Nāgeśa says that for Vyāḍi the quality becomes the 'implied basis' of the word (the ground for capturing the reference, and not its 'referent', see section 3.6).[19]

The Vaiśeṣika notion of quality is rather technical and arbitrary. Thus, it has been rejected by the grammarians in this context. The Sanskrit word '*guṇa*' is also used in popular parlance in the sense of 'subordinate' or 'dependent'. Helārāja says that the grammarians like Vyāḍi can very well exploit this popular notion of quality (*guṇa*) and claim that their notion of quality is in accordance with the popular notion in the sense that their 'quality' cannot function independently unless there is some substance or something to function or act upon. In fact, the grammarians' notion of quality is very similar to the *Navya-nyāya* notion of a 'qualifier' (*prakāra* or *viśeṣaṇa*).

3.6. VYĀḌI'S THEORY OF MEANING

The theory of philosophical semantics, as developed by the Sanskrit grammarians we are discussing, is very interesting. In this section I shall try to explain some aspects of this semantic theory.

[19] Helārāja, p. 190.

Ontological substance, as a follower of Vyāḍi sees it, is something which lies beyond our grasp. We cannot perceive or understand 'formless' (*nīrūpa*) substance without reference to some kind of 'form' or quality or property.[20] Whenever we want to refer to any substance (in a natural language) we use a nominalized word, and implied in this word there lies a sense, a 'quality', which accounts for this use. In other words, a nominalized expression in this theory is a pointer to some substance (physical or mythical), but this pointing is done always through some 'quality' or property, known as its 'ground for application' (*pravṛtti-nimitta*).[21]

It might be useful here to introduce another modern term for 'substances' insofar as they are expressed, or 'meant', or 'named', by words. This is the term REFERENT. We will say that the relationship which holds between nominal words and substances (their referents) is the relationship of reference. In other words, words refer to substances.

Many linguists (including some Indian grammarians) point out that the relationship between a word and its referent is only imputed (not direct) while there is some sort of a direct (viz., causal) relationship between the word and the concept or thought. What Vājapyāyana means by 'quality' is comparable to the 'thought' or 'concept' directly associated with the word. This also justifies the Indian use of the term 'ground for application' for the 'quality' component of the meaning. But Vyāḍi's view, as I understand it, has the implication that we make the 'reference' relation primary. Thus, I have the feeling, without being quite certain, that Vyāḍi would want us to treat this 'imputed' reference relation as the directly relevant goal in our search for the meaning of the word, which the generality feature, the property, of the reference is only an indicator, or index. I will continue to use the term 'implied basis for use' as long as this involves no confusion or misrepresentation.

[20] Bhartṛhari, Book III, chap. V, verse 9. See Helārāja, p. 208.

[21] Kaiyaṭa remarks that Kātyāyana under Pāṇini 5.1.119 assumes a theory of meaning of this kind. Patañjali explains Kātyāyana's *Vārttika* (under Pāṇini 5.1.119) as follows: Each word (*śabda*) is applied to express (denote) a thing (*artha*) on some ground (*artha*), and it is this 'ground' (which is apparently a quality) that is expressed by the addition of abstract suffix '*-tva*.' This is actually Vyāḍi's view. Kaiyaṭa says that the term '*artha*' ('meaning') has two senses here: express meaning or referent and 'ground' for application. See Kaiyaṭa, Vol. IV, p. 91.

Diagram (Fig. 1, which is not quite the same as 'the semiotic triangle' of some western linguists) may be of help in understanding Vyāḍi's theory as discussed by Patañjali under Pāṇini 5.1.119. The two arrows represent the two types of meaning relation: 'w_1' represents the word, 's_1' represents the referent, the 'substance' component, and 'q_1' represents the 'quality' component of meaning, the implied sense. The horizontal line stands for the meaning unit (which is a combination of both the components).

Kātyāyana points out that when the abstract suffix '*-tva*' is added to w_1, the new expression (we can call it w_2) refers to or 'names' the quality q_1. 'In fact, the matter was put indirectly: a word or expression plus the *tva* suffix designates that property due to the presence of which in the substratum (referent) that expression is applied to designate the substance. Under Vyāḍi's theory that we have discussed above, however, when q_1 is thus referred to by this nominalized expression 'w_2' (instead of being implied as the 'ground for application' of 'w_1'), it is turned into a substance, a referent (perhaps, a mystical one instead of a physical one), which we may represent by 's_2' (Fig. 2).

But the grammatical process of nominalizing may be mechanically repeated. Do we thereby generate an infinite number of substances and qualities from just any one pair of them? The answer of the Indian grammarians is in the negative. Patañjali says that as long as w_1 refers to a substance through some fixed quality as its 'ground for application', w_2 will be the name of such quality. But there may be cases where w_1 may refer to s_1 without the intervention of any other quality except 'w_1' itself, the very word as the assignable ground. In other words, s_1 is understood as qualified by nothing else except the reference relation of w_1. In that case 'w_2' will be a name for, or refer to, w_1. This happens when we first learn to use a proper name, say *Ḍittha*, to refer to some person. Thus '*Ḍitthatva*' will designate under such circumstances the very word '*Ḍittha*' itself so to say. However, what has been said here opens up such possibilities. Suppose, after a while we may become acquainted with the person called *Ḍittha* and this proper name will then be connotative of certain qualities (properties and actions) through which we will develop the habit of identifying the person called *Ḍittha*. The addition of the abstract suffix '*-tva*' in that case will refer to that 'quality' (properties and actions) of *Ḍittha*.

There are other cases where the above process may be twice repeated (Fig. 2). *Red* (*rakta*) may refer to a red thing, a substance, and we can formulate the expression *red-ness* (*rakta-tva*) to name the quali-

ty red-colour. But *red* (*rakta*) may also refer to a red patch or red-colour, where we can formulate *red-ness* (*rakta-tva*) as the name of the red universal (*jāti*). But when *red* itself is used to refer to the red universal, we cannot get any further universal or quality as its 'ground for application' except the word itself. Thus, *red-ness* (if it is at all formulated in such cases) will refer back to the word *red*.[22]

What could have opened an infinite regress is in this way turned into a closed circle. The 'quality' component of the meaning of w_1 is sometimes turned into a self-reflexive relation (Fig. 3). The 'quality' component of the meaning of 'cow-ness' is 'cow-ness', while its referent, the 'substance' component is the cow-universal. This seems to be quite a reasonable principle (of the Indian grammarians) because otherwise it would be somewhat futile to insist that there will always be a SEPARATE 'quality' component of the meaning of a word where no evidence or criterion (*pramāṇa*) can be brought forward for the existence of such a separate 'quality' component other than the fact that we have grammatically formulated a nominalized expression to refer to it. This raises another important question. Since cowness is present

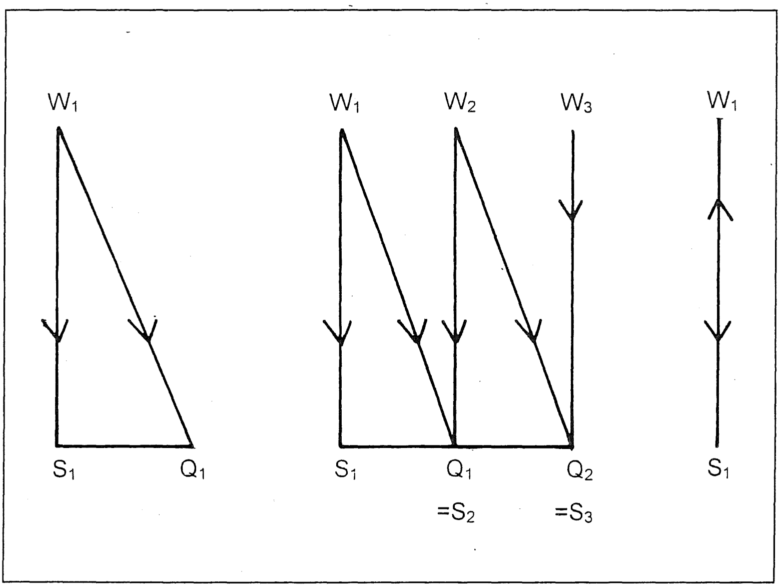


Fig.1 Fig. 2 Fig.3

[22] See Helārāja, p. 193.

or located in a cow, we call it a cow (we call a cow a cow because it has cowness in it—as the general saying goes, 'we call it blue, because it has blue colour in it'). Now, 'cowness' designates cowness—because it is in a cow. However, if 'cowness' designates 'cowness', the word itself, according to the principle just outlined, then 'cowness' the grounds for applying the word itself should be located or present in cowness, the designatum. Seemingly it comes to an absurdity. However, the grammarians, whose view I am expounding, would not shrink from running this risk. The pervasive Sanskrit idiom permits such a possibility. The invariable paraphrase of 'This word means that object' is 'This word is IN that OBJECT/MEANING'. Kātyāyana's intriguing expression is *dravya-śabda-niveśa* = 'locating or placing of the word IN/ON the substance = object = referent.' So 'cowness' can reside in cowness, and the above solution to the infinite regress problem cannot be faulted along these lines. This type of linguistic intuition may not be articulable in English, but it is not entirely beyond comprehension. Those who say (a dominant ancient view both in India and the West) that there is some intimate eternal connection between word and object, would have to say that the word is connected with the object. This connection may not be physical touching, but an abstract, notional residence in, through ownership of, the object, is a comprehensible and intelligible picture.

The notion 'reference', as it is understood generally in most semantic theories, carries with it presuppositions of 'existence' (or, 'reality') which derive from our direct experience of objects in the physical world. To say that a particular word 'refers to' an object implies that its referent is an object which 'exists' (is 'real' in some sense). One may also claim that if something exists it would be possible, in principle, to give a description of the 'physical' properties of that thing. Initially this notion of 'physical existence' is bound up with the semantic notion of reference. But the application of the terms 'existence' and 'reference' has to be extended in various ways in order to explain satisfactorily Vyāḍi's theory of semantics. In fact, 'existence' would be synonymous or co-extensive with Vyāḍi's notion of substance that we have discussed above. Thus, we can ascribe, in a certain kind of discourse, a fictional or mystical existence to theoretical constructs such as universals and fictional or abstract objects. In other words, a follower of Vyāḍi will call them 'substance'. We have to regard these uses as somehow justified analogical extensions of the notions of 'substance', 'existence', and 'reference'. And the starting point of

these notions is to be found in their initial application to physical objects in everyday language.

Vyāḍi was primarily a linguist and hence, perhaps, did not have serious interest in ontological issues. Although he might be said to have been aware of the general principle that reference presupposes existence, he seems to have contended also that even the notion of so-called physical objects as substances need not be taken seriously. In fact, it has been said that the ontological substance, which is synonymous with existence, is formless and hence cannot be perceived or known or understood without the mediation of some quality or property (imposed or real).[23] In the case of physical objects, this mediation or intervention of qualities (that is, sense-qualities) is so direct, prominent, and explicit that we can say that we have the 'feel' of the substance. In other cases, this connection is remote and diffused.

It may be noted that these grammarians did not posit any additional category or posit 'reality' of certain disputed entities as a philosopher might have done. They did not also dispute seriously the pragmatic validity of the commonsense assumption of the reality of 'physical substances' and 'physical qualities' like colour or motion, as well as the rather philosophical assumption of the reality of certain universals like cow-ness or action-universal. In a sense, they were following the common convention (philosophical or popular) insofar as it helped them in developing a satisfactory semantic theory consistent with the structure of the Sanskrit language.

The semantic theories of Vyāḍi and Vājapyāyana are also carried over to the cases of compound words, phrases, and sentences. Vyāḍi, for example, holds, and this is consistent with his emphasis on the 'substance' aspect, that the primary function of a sentence (or a phrase) is 'exclusion' or 'dissociation' (*bheda*). Vājapyāyana, on the other hand, holds, and this too is consistent with his emphasis on the 'quality' aspect, that the primary function of a sentence is 'association' or 'inclusion' (*saṃsarga*). These two theories have always been ambiguously contrasted by later writers without discussing them in such a manner as to shed light on their real significance.[24] I am personally not very clear about the exact significance or implication of these two theories.

[23] See note 20 above.

[24] For recent studies, see M. Hiriyanna, pp. 261–6, and K. Kunjunni Raja, pp. 191–3. The connection of Vyāḍi's theory with Diṅnāga's theory of *apoha* 'exclusion' (mentioned by K. Kunjunni Raja twice) is, however, dubious.

A fairly clear account of Vyāḍi's view can be reconstructed from some remarks of Patañjali under Pāṇini 2.1.1. Since it will be difficult to explain Patañjali's example in English, I shall adopt a simpler example (one discussed by Pārthasārathi Miśra in his commentary on Kumārila). The expression *cow* in the sentence *(The) cow (is) white (gauḥ śuklaḥ)* refers to, under Vyāḍi's theory, a particular cow-substance, that is, IDENTIFIES (in the Strawsonian sense)[25] an individual by virtue of its possessing cow-ness. In fact, it identifies the individual by 'excluding' such individuals which do not possess cow-ness. The word *white* refers to, that is, identifies, the same individual by virtue of its possession of white colour. In other words, it identifies the individual by excluding non-white things. Thus, the whole sentence can be said to refer to the individual which is both a cow and white in colour by excluding all other individuals (it is ascribed the logical form of an identity, not a simple predication). And hence a sentence of the form *Bring me a white cow* is intended for bringing an individual excluding everything that is neither white nor a cow.[26]

If we combine this interpretation with the following remark of Helārāja (under Bhartṛhari's *Vākyapadīya*, Book III, chap. V, verse 1), we can get at least a vague idea of Vyāḍi's view about the 'implied basis' of descriptive phrases or sentences. The addition of abstract suffixes to such compound words as *a king's man, a cowherd's son*, and *a man who cooks*, will give us the 'names' of what would be their implied senses or 'quality' components of their meanings. The implied basis of *a cowherd's son* (*aupagava*), for example, is the son's relation to the father cowherd (to be expressed by '*aupagavatva*'. One might add in the same vein, that the addition of an abstract suffix to some nominalized form of a sentence will give us the expression for the implied basis of that sentence and this implied basis will be nothing but the semantic connection (*saṃsarga*) of different referents designated by the words occurring in that sentence. This justifies Kaiyaṭa's remark

[25] Strawson [1959]. The rough characterization which Strawson gives to the notion of 'identification' in the first two pages of his book will suit my purpose here.

[26] Both M. Hiriyanna and K.K. Raja have interpreted the expression *cow* in this context as referring to the class of cows. I am not quite sure of this point yet. It seems to me that the absence of an explicit article or explicit quantification in good Sanskrit has been responsible for the idea that *cow* in such sentences refers to the cow-class rather than to a particular cow. For my clarification of this point, see chap. 2, sec. 2.6.

that the difference between Vyāḍi and Vājapyāyana regarding their views about the meaning of sentences amounts to a question of emphasis. Thus, 'connection' or 'association' (*saṃsarga*), which Vājapyāyana regards as the primary meaning of a sentence, is regarded by Vyāḍi as constituting the implied basis of that sentence. Thus, because there exists a 'connection' between white colour and cowness, both being located in the substance, we can designate that substance excluding it from others—non-cows and non-white things. This at least seems to approach the model of assertion which states an identity of previously presented 'substance' objects (presented in various ways by the words used). A substance is identified as the substratum and its identity is established by dissociation or exclusion.

3.7. AN ANALYSIS OF VYĀḌI'S THEORY IN MODERN TERMINOLOGY

Of modern theories of philosophical semantics, the one that has been quite outstanding and influential among philosophers and linguists is that of Gottlob Frege who made the important distinction between *Bedeutung* (nominatum) and *Sinn* (sense) of words and sentences. It may be useful to see what relevance (if any) Vyāḍi's theory might have in the light of this modern theory.

Frege as a mathematical logician noticed that there is a difference in cognitive significance between '$a = a$' and '$a = b$' or between two sentences like 'Morning Star = Morning Star' and 'Morning Star = Evening Star'. A sign (a name or word combination) not only designates an object which Frege calls the *Bedeutung* of the name, but it also expresses its *Sinn* (sense) 'in which', according to Frege, 'is contained the manner and context of presentation'. Thus, the nominata of 'Morning Star' and 'Evening Star' are the same but not their senses. Frege extended these two notions to cover the cases of sentences. Thus, the nominatum of a sentence is its truth-value while its sense is the proposition expressed by it.[27] In this way Frege made important contributions to the development of modern logic and semantics.

An exponent of Vyāḍi may say that the nominatum of a word is what he calls the 'substance' component of its meaning. But whether Vyāḍi's notion of the referent of a sentence comes any closer to Frege's notion of the nominatum of that sentence may be open to question. More debatable will be Vyāḍi's concept of the 'quality' component of meaning

[27] See G. Frege, 'Über Sinn und Bedeutung'.

and its possible connection with Frege's concept of sense. The notion of Fregean sense is admittedly a more useful and more comprehensive concept capable of scientific investigation. But it might very well be regarded as an explication of that aspect of meaning what Vyāḍi tried to encapsulate by his doctrine of the 'quality' aspect of meaning.[28]

One further remark of Patañjali may be relevant to our point here.[29] The convention of Sanskrit nominal compounding (according to Pāṇini 2.1.58) requires that we compound two words which have identical reference [Vyāḍi's interpretation: *samānādhikaraṇa* = *eka* (one)-*adhikaraṇa* (substance or locus)]. Thus, we cannot compound two COMPLETELY synonymous words, for example, *koṣṭha* 'store-room' and *kuśūla* 'store-room', or two non-connotative proper names like 'Indra' and 'Śakra'. But if there is a slight difference in the 'implied senses' the two terms, such compounding is sometimes permissible, for example, *bhṛtya-bharaṇīyaḥ*, where *bhṛtya* means 'one who CAN BE supported' and *bharaṇīya* means 'one who DESERVES TO BE supported.' Whether there are any two COMPLETELY synonymous expressions in a natural language and whether there can be truly non-connotative proper names are beside the point here. One should note how Indian grammarians like Vyāḍi and Patañjali became aware of the distinction between the two components of meaning, the 'substance' component and the 'quality' component.

Since I have mentioned Frege's theory of semantics in this connection, it is desirable to note certain points which were not discussed by the followers of Vyāḍi's theory. Frege considers primarily the nominatum of singular terms and singular descriptions (and then extends this notion to sentences).[30] Vyāḍi's theory is also primarily concerned with the referents of singular terms and, perhaps, implies that we can treat any nominal expression as a singular term. (See also chapter 2, section 2.6.)

[28] One may note that Frege's distinction of sense and nominatum is generally regarded as the explication of a certain distinction which has been made in various forms in the Western logical tradition. John Stuart Mill's distinction between denotation and connotation may be cited as an example. See Carnap, pp. 126–9.

[29] Patañjali under Pāṇini's rule 2.1.1. See Kielhorn's edition, p. 370.

[30] Thus R. Carnap has pointed out that Frege's concepts are not directly applicable to what he calls 'predicators' (i.e., common nouns or general terms). Alonzo Church has extended Frege's theory so that the nominatum of a common noun becomes a class and its sense is a property. See Carnap, p. 125.

Frege's theory is also concerned with the principle that if a name occurring in a true sentence is replaced by another name with the same nominatum, the sentence remains true. This is an important principle of logic, which has received much attention from modern logicians. The Indian grammarians do not seem to be interested in this problem probably because of the fact that logic was not their primary concern.

Frege contends that all names 'formed in a grammatically correct manner' will have a sense—'But as to whether there is a denotation corresponding to the connotation is hereby not decided (p. 87)'. Thus, the expression 'the series with the least convergence' has a sense, but it can be proved that it has no nominatum since for any given convergent series, one can find another one that is less convergent. Therefore, the grasping of a sense does not with certainty warrant a corresponding nominatum. Such a remark is conspicuous by its absence in the discussion of Vyāḍi's theory which was oriented toward the explanation of grammar.

Finally we may note that later Indian philosophers as well as grammarians like Nāgeśa did discuss the philosophical problem connected with the non-referring expressions like '*śaśa-śṛṅga*' (*the rabbit's horn*). We shall discuss this problem in the next chapter.

4
Empty Subject Terms in Logic

CHRONOLOGICAL NOTE. Jñānaśrīmitra was one of the most important Buddhist philosophers in the tenth–twelfth centuries AD. His works are collected and published under the title *Jñānaśrīmitra-nibandhāvali*. He was the teacher of Ratnakīrti, who summarized the views of his teacher in his work. Udayana in his *Ātmatattvaviveka* mainly takes issues with Jñānaśrīmitra. Ratnakīrti is usually believed to have preceded Udayana. But I think Udayana and Ratnakīrti were contemporaries although Udayana was, perhaps, the junior contemporary.

4.1. NON-REFERRING EXPRESSIONS IN LANGUAGE

Kumārila once made a very significant remark: Word or speech can generate cognition even of entities which are totally non-existent.[1] The fact that there are 'meaningful' and grammatically acceptable expressions in language which PURPORT to refer to or to denote some entity or entities but which actually do not refer to anything in our world of experience, has very often proved a puzzle for philosophers and logicians. It is somewhat paradoxical to say that we refer to non-existent entities by such expressions as *the rabbit's horn, the sky-flower* or *the son of a barren woman*. All that we have here is a class of 'meaningful' expressions which share the same substantival structure and possess the grammatical property of a proper name in the sense that they can be successfully used in a context where a proper name might have been used. These expressions have been called 'vacuous' or 'empty' terms. A problem arises when such a term occupies the subject position in a sentence, a problem that is both logical and epistemological.

[1] Kumārila, See *Codanāsūtra*, verse 6 under sūtra 2.

The understanding of a substantival expression or phrase in general does not seem to imply that it has a reference; in other words, understanding of its meaning precedes the knowledge of whether or not the expression actually refers to any real entity. That is why we are justified in calling such expressions 'meaningful' although they fail to refer to anything.

An unusual strain of realism pervades our ordinary language in such a way that whenever we try to refer to or express an imaginary or fictitious object we feel constrained to admit some kind of 'relative' reality for these fictions. If we are not happy about this admission, viz., that our fictions have some sort of 'relative' reality, the opponent tries to point out that we would otherwise face a logical problem which will be hard to explain away. To put it simply, it would be difficult, for example, to negate (logically) a statement whose subject is a fictitious object. The actual formulation of the antinomies of a two-valued logic will mainly concern us in this chapter and also, to some extent, in the next. The awareness of these antinomies can be clearly discovered, as we shall see, in the writings of the Naiyāyikas and the Buddhist logicians of the 10th-12th centuries.

An initial note on the source material used in my discussion is in order. The Nyāya position as expounded here is mainly that of Udayana. The Buddhist position is that which Udayana regarded as the view of his Buddhist opponent. The idea of momentariness of all entities apparently belongs to the Sautrāntika school of Buddhism. Unfortunately no extant philosophical text of the Sautrāntika school where this problem is discussed is available to us. But a good account of the thesis of momentariness has been presented by Dharmakīrti and his followers. Udayana becomes involved in the argument concerning the status of empty terms while he is repudiating the logical proofs of the thesis of momentariness. In the first chapter of his *Ātmatattviveka* (from which I have largely drawn my material), Udayana is mainly concerned with the Buddhist views as set forth by Jñānaśrīmitra in his *Nibandhāvali*.

4.2. THE RIDDLE OF 'NON-BEING'

The Nyāya school claims that a sentence whose subject term does not refer to anything stands in need of some philosophical paraphrasing. A sentence is a representation of some cognitive state. A cognitive state, that is, a judgmental one, usually attributes a property to a subject or qualificand. And this attributable property can be called a qualifier.

Now, a cognitive judgment fails if it lacks a subject to which it can attribute some property. Hence, a sentence which apparently has a non-referring expression as its grammatical subject undergoes a philosophical paraphrasing in the Nyāya system so that it can properly represent some judgmental (or qualificative) cognitive state. A judgmental cognitive state may be erroneous where the representing sentence will be regarded as false. If a cognitive judgment is right, the corresponding sentence will be true. Thus knowledge and error are the epistemic counterparts of the truth and falsity of the sentences that express the corresponding cognitive states. Proceeding along this line, the Nyāya realism almost tried to show that a sentence with a non-referring expression as its subject should be traced back to some kind of erroneous cognitive state and should be explained accordingly. In other words, Nyāya ruled that these sentences were demonstrably false. B. Russell seems to have tried to analyse such sentences in much the same way. It has been shown by him that these sentences can be paraphrased into such logical forms as will make them patently false.[2]

Apart from this apparent similarity, the philosophical motivation of Russell was, perhaps, not very different from that of the Nyāya school. Among other things, Russell was worried about ontology. Thus, he wrote: 'It is argued, for example, by Meinong, that we can speak about "the golden mountain", "the round square", and so on; we can make true propositions of which these are subjects; hence they must have some kind of logical being, since otherwise the propositions in which they occur would be meaningless. In such theories, it seems to me, there is a failure of that feeling for reality which ought to be preserved even in the most abstract studies.'[3] Whether A. Meinong did actually postulate such a theory or not can be determined from his doctrine of the independence of what he calls *Sosein* from *Sein*.[4] Roughly speaking, Meinong contended, arguing for a very broad sense of the term 'object', that the object's having some property or characteristic is not affected by its being existent or non-existent. Thus, although the round square does not exist because it cannot exist, it is possible to make true assertions about it or to predicate some property of it. In other words, we might truly say, 'The round square is round and square'. Even at the risk of a paradox, Meinong adds, one can very well say,

[2] B. Russell [1905].
[3] B. Russell [1919], p. 169.
[4] A. Meinong, pp. 76–117.

'There are objects of which it is true to say that there are no such objects'. To the criticism that the law of contradiction would be violated if the sentence 'The round square is round and square' is held to be true, Meinong replied by saying that the law of contradiction holds only of what exists, or is real, and is thus not violated by the sentence in question.

Even if we leave Meinong aside, we can conceive, following W.V. Quine,[5] of some fictitious philosopher like McX or Wyman, who would be willing to countenance at least subsistence, if not existence, to such entities as the golden mountain. In other words, these philosophers would posit a world of 'unactualized possibles', but would resort to the doctrine of meaninglessness when faced with such self-contradictory expressions as 'the round square' or 'the son of a barren woman'.

Part of the difficulty connected with sentences with non-referring expressions as their subject terms can be transformed into a logical riddle. This riddle has a long history in the West and it is usually nicknamed PLATO'S BEARD. Dr Arindam Chakrabarti, a former student of mine at Oxford, has partly convinced me that not all Naiyāyikas were as close to Russell as I had thought. Besides, I believe Meinong's similarity with the Buddhist approach is somewhat significant. Bhartṛhari, I believe, made many sensible comments which need to be explored in this connection. In India the story is more or less the same. The riddle of 'non-being' in some form or other stayed alive in the controversies between the Buddhists and the Nyāya philosophers down the centuries.

4.3. THE STATUS OF 'EXAMPLE' IN INDIAN LOGIC

I shall explain presently the Indian version of the riddle of non-being following Udayana.[6] Some acquaintance with the development of Indian logic during the time of Jñānaśrīmitra and Udayana is necessary for understanding the Indian version. The Buddhist believes that the logical demonstration of the proof of his thesis (viz., everything that exists is momentary) is possible. Thus he tries to formulate a philosophical argument in the standard logical form which is mainly non-deductive. Unfortunately, modern interpreters sometimes try to reduce the argument to a deductive inference.

A few remarks about the nature of Indian logic may be in order here. Logic developed in India out of two slightly distinct traditions: 1. *vāda*

[5] W.V. Quine [1961], Essay 1.
[6] Udayana, [*ATV*], pp. 56–89.

tradition, that is, tradition of debate which was concerned with dialectical tricks, eristic arguments, and sophistry, and 2. *pramāṇa* tradition, which was concerned with the criteria of empirical knowledge. On account of this genesis, Indian logic imbibed an epistemological character which was never removed throughout its history.

The model of reasoning with which the Indian logicians were chiefly concerned was not PURELY deductive. Modern interpreters of Indian logic have seldom realized this point (for such oversight, see H.N. Randle). As a result there have been some confusing and futile attempts to reduce the arguments studied by the Indian logicians to an Aristotelian syllogistic model. It should be noted that in spite of the neatness, elegance, and precision of a deductive system like that of Aristotle, it is undeniable that a good deal of our actual reasoning may not follow the deductive pattern. The reasoning of an experimental scientist, an historian, or an ordinary man trying to ascertain the truth of a particular matter, is reasoning from what we may call 'evidence' to what we can call 'conclusion'. Even most of our philosophical arguments, where we try to depend more or less upon empirical evidences, belongs to this type of inference. A purely deductive model is not always appropriate to this kind of reasoning.

In a deductive reasoning, the so-called premises ENTAIL (in some acceptable sense of this term) the conclusion in such a way that if we accept the premise we cannot afford to avoid the conclusion without the risk of contradicting ourselves. In a non-deductive argument, the conclusion is not ENTAILED in the same sense by the premises. We should rather say that our evidence or 'premises' here justify or support the conclusion. Evidence may be good or bad, and the corresponding argument may be sound or unsound. Thus, it seems to be better to talk in terms of soundness and unsoundness of this type of argument (instead of talking in terms of their validity or invalidity).

The general form of the arguments studied by the Indian logicians is: *A* is *B* because of *C*. The middle term or the 'reason' *hetu C* can be either adequate or inadequate (instead of being strictly valid or invalid). An adequate middle term or 'reason' will establish the conclusion and the argument will be sound. If the middle term is not adequate, the conclusion will not be established and the argument will be unsound. Ordinary conversation and philosophical treatises provide millions of examples of this kind of argument.

In a non-deductive inference, for example, 'It must have rained BECAUSE the ground is wet', the second part is believed to be the ADEQUATE ground for accepting the first. And most Indian logicians tried

to frame the rules of logic from paradigm cases of sound inferences of this kind. But the neatness of a deductive system can easily capture our mind. We may thus be tempted to introduce an additional premise so that these arguments will be deductively valid. We can resort to the theory of 'suppressed premises' and decide that we are dealing in fact with deductive arguments in all these cases. But this seems at best to be a distortion and at worst the demolition of the original structure of the actual argument. That we are inclined to reduce these arguments to deductive arguments proves that we are somehow assured of the SOUNDNESS of these arguments in much the same way that we feel secure about a deductively valid conclusion. But this reduction, even if it is sometimes justified, throws very little light upon the original problem, for example, how can we reasonably draw, as we obviously do, conclusions from so-called premises which do not strictly entail them? We merely direct our attention to a slightly different and a bit narrower question: How do we establish general propositions such as these 'suppressed' premises? Most of these premises are not admittedly necessary propositions, that is, analytic judgments. They are in some sense 'synthetic' propositions representing general beliefs which come from common experience.[7] The early history of Indian logic seems to have been a search for an adequate model which will explain both deductive and non-deductive, empirical, inferences.

That it is often misleading to introduce a 'suppressed' general premise in some cases can be easily shown by applying the same method to a dubious case, that is, an unsound non-deductive argument: Speech-sound is permanent because it is audible (fifth type in Diṅnāga's table of 'reasons'; cf. his *Hetucakraḍamaru*). Should we construe this case as having a general premise 'Everything that is audible is permanent', and thus treat the argument as deductively valid with a false conclusion from a false premise? Or, should we construe our general premise as 'Nothing that is audible is permanent', and thus make the argument deductively invalid? The truth is that in either case we are turning our attention from the actual structure of the argument to our experience and general belief. In fact we prejudge the case seeing that the conclusion is definitely false.

The best thing of course would be to do neither. The Indian logician says that you cannot state your general premise or the universal proposition unless you can cite a supporting 'example' (*dṛṣṭānta*). A support-

[7] See also my review of C. Geokoop. For a similar point, see Strawson [1952], pp. 234–6.

ing 'example' can be of two types: an 'agreeing example' (*sādharmya-dṛṣṭānta*) and a 'disagreeing example' (*vaidharmya-dṛṣṭānta*). An 'agreeing' example is a case where both the 'reason' and the 'inferable property' (*hetu* and *sādhya*, comparable to Aristotle's middle term and major term respectively) are present together. This will at least show that neither the 'reason' nor the 'inferable property' can be fictitious. A 'disagreeing' example is a case where both the reason and the inferable property are absent.

With this prelude we can proceed to the heart of the controversy between the Buddhist and the Nyāya logicians. The thesis of momentariness which the Buddhist wants to prove is a universal proposition:

> Whatever exists is momentary.

Its contrapositive version is:

> Whatever is non-momentary does not exist.

The 'reason' in this case is 'existence', and the 'inferable property' is 'momentariness'. Now, to prove the invariable connection between the 'reason' and the 'inferable property', the Buddhist logician must cite, in the first place, some 'agreeing' example where the two properties (the 'reason' and the 'inferable property') and their connection are instantiated. But the 'agreeing' example will not be enough unless one can support it by the citation of what is called a 'disagreeing' example. A 'disagreeing example' is something that instantiates the contraposed version of the main thesis. According to the acceptable form of demonstration, the Buddhist, in order to prove his thesis, must cite not only an 'agreeing example' but also a 'disagreeing example' for making his argument sound and convincing.

Although the proof here consists in the citation of a 'disagreeing example', the conclusion should not be regarded in any way unsound or uncertain. The whole point of citing a 'disagreeing example' is to show the actual absence of any counterexample. If a counterexample can be found where the 'reason' is present but not the inferable property, then the supposed thesis is immediately falsified. Thus, the soundness of the conclusion depends upon the absence of any counterexample, or our failure to discover any counterexample.

Now, a difficulty arises when we try to find a 'disagreeing example' for the above thesis (viz., an instantiation of the contraposed version given above). To cite an example of unreality would be in some sense

to contradict one's own position because it would be like saying that there is an example (or, an entity, if we like) which, according to us, is unreal, that is, non-existent or a non-example. An 'example', or what is called a *dṛṣṭānta* in Indian logic, must be a well-established case admitted by both sides in a philosophical debate, the opponent *and* the proponent. It is implied here that there is an accredited source or 'means of knowledge' (*pramāṇa*) by which we can establish the example. Thus, an example can never be an unreal entity. This will finally lead, according to Nyāya, to the destruction of the Buddhist claim that he can prove 'logically' the momentariness of everything.

4.4. THE NYĀYA-BUDDHIST CONTROVERSY

It should be made clear at this point that neither the Nyāya nor the Buddhist wishes to countenance the world of strange entities like the golden mountain or the rabbit's horn. But the difference lies in their method of approach to the problem.

Confronted with the Nyāya criticism (noted in the last section), the Buddhist does not so easily give up his hope of proving his thesis of momentariness. He tries to point out that the position of the opponent, that is, the Nyāya position, also involves a self-contradiction. By saying that an unreal entity cannot be used as an example, or cannot be used as the subject of a proposition, the Nyāya actually mentions 'an unreal entity' in his speech-act. And this can be shown to imply a proposition whose subject would be an unreal entity or a non-existent fiction. Thus, for example, the Nyāya would have to argue: The rabbit's horn is a non-example because it does not exist. And this will contradict the original Nyāya position that a fictitious entity cannot be the subject of a proposition. Thus, the Buddhist claims to have proved his thesis of momentariness even at the risk of an implicit contradiction, because the rejection or criticism of his argument would lead the opponent into a patent self-contradiction.

Udayana remarks here as follows:[8] The Buddhist wants to avoid a patent self-contradiction (like saying 'the rabbit's horn cannot be the subject of any proposition because it does not exist') and thus allows that certain speech-acts, and consequently certain sentences, about fictitious entities like the rabbit's horn are quite in order. The Buddhist, in fact, does not want to accept the Nyāya position that the subject term of a sentence must refer to something actual (or real), and if it does

[8] Udayana [*ATV*], pp. 64–5.

not, the whole sentence stands in need of some philosophical paraphrasing. Thus, for the Buddhist, 'The rabbit's horn is sharp' is a normal sentence which we may use in our discourse for various purposes. One of such uses is made when we cite an example of a non-entity, viz.,

'The rabbit's horn is non-momentary and also non-existent.'

Nyāya, on the other hand, wants to exclude from logical discourse any sentence which will ascribe some property (positive or negative) to a fictitious entity. Vācaspati remarks that we can neither affirm nor deny anything of the fictitious entity, the rabbit's horn.[9] Thus, Nyāya apparently agrees to settle for a 'superficial' self-contradiction because, in formulating the principle that nothing can be affirmed or denied of a fictitious entity like the rabbit's horn, Nyāya, in fact, is violating the same principle. Nyāya feels that this 'superficial' self-contradiction is less objectionable because it can somehow be explained away, while the Buddhist approach to the problem is deplorable because it will eventually lead us to reject any discrimination between actual and fictitious entities.

To simplify the matter for discussion, we might talk in terms of exemplified and unexemplified properties (borrowing the terms of R. Carnap with suitable modifications)[10] instead of talking in terms of referring or non-referring expressions. A referring expression, be it a name or a description, can be said to signify a property (in a broader sense) which is exemplified by the individual it names or the individual that answers the description. A non-referring expression signifies a property, or rather a complex of properties, which is not so exemplified. An unexemplified property (or property-complex) may be also called an EMPTY property (the term being borrowed from Carnap).

The Buddhist argues that it is possible to talk about fictitious objects or empty properties because, otherwise, one cannot even deny successfully their existence. Thus it is in order when we purport to attribute empty properties to fictitious individuals or when we use a fictitious individual as a 'disagreeing example' or even as the subject of some negative proposition. A putative answer to 'the riddle of non-being' can be given as follows: An utterance like

'The rabbit's horn does not exist'

[9] Vācaspati, pp. 172–3.
[10] R. Carnap, pp. 20–1.

is perfectly all right because we are only denying existence or 'actuality' to a fictitious entity. Similarly, the utterance

'The rabbit's horn is not sharp'

is also in order because here we simply refuse to attribute a property, viz., sharpness, to a fictitious object. One may also add that the correctness or soundness of these utterances can be authenticated by our accredited means of knowledge (*pramāṇa*). We can neither perceive the rabbit's horn, nor test its sharpness by direct perception, nor even can we infer its sharpness on any logical grounds (such as knowing that it cuts hard objects easily).

But if we accept empty subject terms in order to make the denial of existence to fictitious entities successful we will invite other logical problems. Udayana points out that if the negative sentence

'The rabbit's horn is not sharp'

is held to be true because it is authenticated by our accredited means of knowledge then the affirmative sentence

'The rabbit's horn is sharp'

can be argued to be true also on similar grounds. Since the rabbit's horn cannot be known through any means, no one can establish that it is not sharp. As long as it is not established that it is not sharp we cannot refute somebody's claim that it is sharp. Vācaspati's advice was that one should remain silent.

Udayana notes: 'If nobody has ever seen or known a person called "Devadatta" anywhere at any time, then the question "Is Devadatta white, or is he black?" results simply from some outrageous perversion. And if, without caring to understand what this is all about, someone answers the question by saying "he is white" another person has as much right to answer by saying "he is black". Nothing is established by such questions and answers. In each case, the lack of our means of knowledge (to establish the subject term) and (the consequent possibility of) self-contradiction remains the same'.[11]

The point that the Nyāya tries to make through this criticism is this: if we allow statements about fictitious entities in a logical discourse—statements by which we purport to attribute some property (positive or negative) to the fictitious entity—we will have no way of deciding

[11] Udayana [*ATV*], p. 69.

whether they are true or false, for it will never be possible to experience the fictitious entity through any accredited means of knowledge. But the Buddhist argues that we do utter statements about fictitious entities. We tell fictitious stories, and we can conceive of unreal entities like the rabbit's horn or the hair of a turtle. It is not always the case that we have to KNOW a thing before we may make statements about it or attribute some property to it. A simple cognition, an error, a conceptual construction, or even a deliberate attempt at fiction, will be enough to justify our speech-acts about fictitious entities. And statements about fictitious entities like the rabbit's horn may also serve some useful purpose in a logical discourse.

In fact, the Buddhist proposes a kind of pan-fictional approach to the world of phenomena. Thus he believes that language creates fictions and the cognitive element in language can very well be the cognition of a fiction. In other words, an unreal entity can be as much the object of a cognitive state (that is, an erroneous cognitive state) as it can be expressed by some non-referring expression in language.

4.5. THE EPISTEMOLOGICAL SIGNIFICANCE OF THE CONTROVERSY

Let us consider

A. 'The rabbit's horn is sharp.'

Nyāya says that here the subject term itself can be treated as a complex term, in fact, a 'disguised' sentence, in which we are attributing either the property of having horns to a rabbit, or the property of belonging to a rabbit to the horn. As long as this is a wrong attribution, the whole sentence should be regarded as false because it can only represent a possible error, that is, an erroneous cognitive state.

The issues involved here are eventually connected with an epistemological problem, that is, the problem of explaining an erroneous cognitive state. I believe most of our philosophical worries about the problem of the non-existent can be or should be resolved by an appeal to how we would like to explain the content or structure of our false cognitions, errors or non-veridical states. This is the lesson to be learnt from the Indian tradition. Nyāya contends that our error consists only in our wrong attribution of a property to a subject. But the property itself or the subject itself must be a REAL entity of this universe. The Buddhist

claims that an error does not necessarily consist in the wrong attribution. According to a section of the Buddhists (viz., the proto-Mādhyamika), an error consists in making an unreal thing appear as real. The Nyāya theory is called the *anyathākhyāti* theory of error, while the proto-Mādhyamika view is called the *asatkhyāti* theory of error.

Let us consider the situation of a perceptual error for the purpose of comparison. When someone perceives (erroneously) a snake in a situation where only a rope is present in the visual field and hence in contact with one's sense organ, we can say that he has an erroneous perception of the snake. In fact, we can show him that what he saw was not a snake but actually a rope by, examining the object further. But if he is dense enough (or, philosophical enough) to ask 'It was not WHAT snake?' we will be in trouble because it will be difficult to deny successfully (as we have seem in the last section) the existence of a non-existent or imagined snake. Whether or not he has seen a REAL snake in life before is just beside the point here. The particular snake which he THOUGHT he perceived a moment ago cannot be the subject of a successful denial because if that particular snake (or, perhaps, we should say, the snake particular; or the snake-datum, if you like) is totally non-existent then the denial of its existence will be pointless, and if it is supposed to have some sort of existence (that is, 'subsistence') then the denial will be contradictory. One may resort to such an ambiguous position as the following: The particular snake I experienced a moment ago is not on the same level of reality as this piece of rope which I am experiencing now, nevertheless, that particular snake-fiction is not entirely unreal because otherwise I would not have experienced it a moment ago. This will invite a host of philosophic questions about the nature and criteria of reality which we need not go into here. Our purpose will be served if we remember the metaphysical background in which the Nyāya and the Buddhist theories of error were developed.

It will be consistent for the Buddhist to say that the object of an erroneous cognition (or of a dream cognition), viz., 'this is a snake', is unreal. It is, on this view, part of the nature of a cognitive state it allows an unreal or non-actual entity to appear in it as 'object'. The following judgment, viz., 'this is not a snake', which destroys the error reveals simply the unreality, that is, the non-existence, of the snake. Suppose we accept causal efficiency as our criterion of reality. A REAL entity may be the object (*viṣaya*) of a perceptual cognition by being somehow causally related to the production of that perception. But if

something has become the 'object' (*viṣaya*) of a cognitive state, it does not follow that it must have been causally related to the production of that cognitive state. For example, the 'snake' grasped by an erroneous perception of the form 'this is a snake' becomes the 'object' of this cognitive state without apparently being causally related to it. Thus, a cognitive state is an intentional act where a non-existent entity can very well be revealed as the 'object'. This is, in brief, what is implied by the *asatkhyāti* theory of error.[12]

The Nyāya reply to this is somewhat theory-bound. Nyāya realism does not admit that a TOTALLY fictitious entity can be the 'object' of any cognitive state, even of an error. Nyāya attempts to construct a theory of reality, a conceptual scheme, that consists of some interconnected basic categories (viz., the scheme of Vaiśeṣika categories). Thus, it is asserted that corresponding to each fundamental element of thought or cognitive state there is a fundamental element of reality. The so-called fiction is always constructed out of real elements. And these real elements can be categorized under some basic principles.

A judgmental cognitive state combines two or more elements of reality, and a sentence expresses such a state. An error or erroneous judgment combines two elements of reality which are not actually so combined. To be more precise, a simple error combines two elements of reality that are not so combined in reality. One might say that the verbal expression of an error purports to refer to a fictitious entity. But Nyāya hastens to add that the fundamental elements that go to constitute the object-content of an error are all real elements or real properties exemplified somewhere in the world. Even the oddest fantasy can be broken into elements each of which is not just 'airy nothing' but 'has a local habitation and a name', that is, is real.

Nyāya criticizes the *asatkhyāti* theory of the Buddhists by saying that what becomes the 'object' of a cognitive state is also, in some acceptable sense, causally related to that cognitive state, and that it is absurd to suggest that a fictitious non-entity can cause anything. Thus, in the case of perception, what becomes the 'object' causes, at the same time, the perception itself as an event. Even a perceptual error has an 'objective basis' (*ālambana*) which causes such an error. In the case of wrong inference also, we do not deal with fictions. We are either mistaken about our initial perception which lies at the root of such an inference or we fail to apply the rules of correct inference. In the case

[12] Vācaspati, pp. 85–6. For the Nyāya theory and the Prābhākara theory of error, see my Review of Mohanty, pp. 327–8.

of an erroneous cognitive state derived from someone's utterance, we should analyse its object-content also in a similar fashion.

It may be argued that the expression *the rabbit's horn* is understood to refer to some nonexistent entity because no such thing as the rabbit's horn is found in this universe. Nyāya meets the objection in this way. Like perception, language is also a source of knowledge. Through words or a word-complex, we know ATOMIC objects. This is called conception. And from sentences we know FACTS or object-complexes. This is called judgment. Thus, the situation is comparable to that of perception where we can have either judgmental perception of facts or 'simple' perception of (atomic) objects (see chapters 1 and 2). Error arises in the case of judgmental or qualificative perception only (chapter 2, sections 2.8, 2.9). It is impossible for a non-qualificative 'simple' perception to be wrong about anything unless we allow that the 'simple', unitary (indivisible) object-content of such a perception can sometimes be TOTALLY fictitious having no 'objective basis' (*ālambana*) in the objective world. But as far as Nyāya is concerned, this possibility is ruled out. A qualificative perception can be described as '*a* sees that *x* is *P*', and hence there arises the chance of its being erroneous in case the property expressed by '*P*' is not actually present in *x*. Here, *x* is the *ālambana* 'objective basis'. The property expressed by '*P*' may be a SIMPLE one, or, it may be a complex one in which case it should be analysable into SIMPLE components.

4.6. THE IMPLICIT NYĀYA SEMANTIC PRINCIPLE

Nyāya asserts that a simple, non-complex property should not be EMPTY if we are to build a realistic account of the world we live in experience and believe to be real. We cannot conceive of a simple, non-complex property which is not instantiated by anything in this world. Acceptance of this principle is almost axiomatic in the Nyāya system. (But is the principle false? Let '*Pn*' be the property of having the mass *n*. Then, for all *n*, *Pn* is a simple determinate property. But it is not the case that for all *n*, there is an *x* such that *x* is *Pn*.) Thus, a complex property is held to be analysable in this system into 'simple' components which must be individually instantiated somewhere in the actual world. When we say that a particular property is empty, we mean that the combination of a number of simple REAL (that is, non-empty) properties is not as such exemplified in the actual world (at a given time). One may combine two contradictory or mutually exclusive properties in which case the combination will be expressed by a self-contradictory expression.

One may also combine two non-exclusive, but hitherto uncombined or unconnected, properties in which case it will be an empty property expressed by a non-referring expression. *The son of a barren woman* will be an example of the first kind, *the rabbit's horn, a man who is twenty-foot high,* and *the hair of a turtle* are examples of the second kind. (Note that one has to take the time of utterance also into consideration: *the present king of France* was not a non-referring expression when France was a monarchy, nor is *the first man on the moon* since the time Neil Armstrong landed on the moon.)

A problem will apparently arise if someone insists that a non-referring expression such as *the rabbit's horn* or *unicorn* is not the result of a combination but should be treated as an 'atomic' non-divisible expression. In other words, whatever is signified by such an expression could be regarded as a simple, indivisible property. In that case, one can say that we do utter expressions signifying simple, indivisible properties which have no exemplification in the world of experience. Udayana anticipates this objection. He adds that if for any perverse reason one wishes to admit expressions in our language which signify simple but fictitious (empty) properties, one will have to find a way to distinguish between two different expressions which signify two empty (but presumably different) properties.[13]

To explain: Unless we allow the meaning of *unicorn* to be indistinguishable from the meaning of *goblin* (or, from that of *the round square*) we cannot hope to prove that these expressions signify 'simple' but different EMPTY properties. The meanings of such expression cannot, in the first place, be learned by ostensive means. We depend upon descriptions to make their meanings understood. Thus it is that the apparently unitary expression finally resolves itself into a series of descriptions which will, in their turn, signify complex properties.

The way Nyāya deals with this problem can be examined with the help of what R. Carnap has to say about his artificial language system S_1:[14] 'Generally speaking, it must perhaps be admitted that a designator can primarily express an intension only if it is exemplified. However, once we have some designators which have a primary intension, we can build compound designators out of them which express derivative, complex intensions, no matter whether these compound designators are exemplified or not.' Nyāya believes that there is a class of 'simple' properties (which are exemplified and) which are expressed by a class

[13] Udayana, [*ATV*], p. 71.
[14] R. Carnap, p. 31.

of 'simple' (non-compound) designators. But compound designators express complex properties which may or may not be exemplified.

Following the Nyāya principle we can resolve

A. 'A rabbit's horn is sharp'[15]

as follows: '(1) Something is characterized by horn-ness, (2) it is characterized by the property of belonging to a rabbit, and (3) it is also characterized by sharpness'. Of these constituents, if (1) is true, (2) cannot be true, and vice versa. And (3) can be true or not true according to whether the subject (whatever that is) is sharp or not. But, in no case will the conjunction be true. And, we can resolve

B. 'A rabbit's horn is not sharp'

as follows: '(1) Something is characterized by horn-ness, and (2) it is characterized by the property of belonging to a rabbit, and (3') it is also characterized by the absence of sharpness'. This will be equally 'NOT TRUE' (*a-pramā*) as before because both (1) and (2) cannot be factually true together. (3') will be true or false according to whether its supposed contradictory (3) is false or true. Thus, the law of contradiction is not violated because B, as a whole, is not strictly the contradictory of A (when both of them are thus analysed). The relation of contradiction may bold between (3) and (3').

One may note here that B. Russell has declared that a sentence of type B is ambiguous. He introduces the notion of 'primary' and 'secondary' occurrences of descriptions to explain this ambiguity.[16] The Nyāya analysis given here seems to forestall the problem of double interpretation by declaring even B type sentences as not true.

4.7. INTERPRETATION OF EXISTENCE AND NEGATION

Using the customary symbols and truth tables of modern logic, we shall try in this section to understand the Nyāya and the Buddhist principles in a somewhat systematic manner. The Buddhist claim may admit of the following analysis: Existence can be predicated in the object-language presumably by some expression like:

$$(\exists x)\ (x = a).$$

[15] I am using the indefinite article 'a' instead of the definite 'the' and maintaining the view that such statements will have existential commitment without the uniqueness condition of the definite article. I have chosen this procedure in order to avoid unnecessary complications.

[16] B. Russell [1919], p. 179.

This is roughly similar to W.V. Quine's method of treating such sentences as '*a* exists' (viz., 'Pegasus exists').[17] (For certain points in this section, I am indebted to Hans Herzberger.)

In order to explain the Nyāya principle we have to use a notion called 'semantic ascent'. Let us use '*h*' to express 'it is the case that' (cf. G. Frege's horizontal); now, where '*P*' stands for any sentence we can have the following truth table:

P	*hP*
T	T
F	F
I	F

(Here 'T' means 'true', 'F' means 'false', and 'I' means 'neither true nor false', that is, 'indeterminate'.) Existence can be expressed via semantic ascent by some expression like:

$$h(\exists x)\ (x = a).$$

Now, the Nyāya manoeuvre roughly consists in this. What is ordinarily not determinate, that is, neither true nor false, is transformed into a falsity via semantic ascent. The principle can be stated as:

IF '*Fa*' or '*a* is *F*' is determinate (true or false) THEN $h(\exists x)\ (x = a)$.

Its contraposed version would be:

IF $\sim h(\exists x)\ (x = a)$ THEN '*Fa*' or '*a* is *F*' is not determinate.

In fact, instead of talking about the rabbit's horn we are talking by semantic ascent about the sense of 'the rabbit's horn'. We are not reading the existential statement as 'There is something *x* which is identical with the rabbit's horn', but as 'It is the case THAT there is something *x* which is identical with (the sense of) *the rabbit's horn*'. We should also note that both the above conditional and its contrapositive are determinate even if their antecedents are true.

My present expedient is largely derived from Timothy Smiley's formalized outline in his 'Sense Without Denotation'.[18] Smiley introduces the singulary connective 't' (comparable to our '*h*'), which is governed by the rule: the value of the sentence tA shall be *T* if the value of the sentence A is *T*; otherwise it shall be *F* (p. 128). Smiley then

[17] W.V. Quine [1960], pp. 176–9.

[18] *Analysis*, June 1960, pp. 125–35.

introduces the distinction between 'primary' and 'secondary' occurrences of terms and a corresponding distinction between two kinds of predicates. Particularly interesting is his contrast between what he calls the primary negation-sign and the secondary negation-sign. In the case of primary negation, a sentence and its negation are contraries in that they cannot be simultaneously true. In the case of secondary negation, on the other hand, a sentence and its negation are contradictories, for always one and only one of them is true (p. 129). Thus, a satisfactory interpretation of existence statements and their negations eventually leads to the clarification of different senses of negation, to which we shall now direct our attention.

It will be convenient to explain the difference between the Nyāya method and the Buddhist method of interpreting the affirmative and the negative sentences with empty subject terms by making use of the notion of 'choice negation' and 'complementation' or 'exclusion negation'. (See also chap. 5, sec. 5.6.) A choice-negation of a proposition '*a* is *F*' or '*Fa*' will give us a falsity if '*Fa*' were true, and a truth if '*Fa*' were false. But if '*Fa*' is indeterminate (for example, 'The rabbit's horn is sharp'), its choice-negation will also be indeterminate. In fact, the choice-negation presupposes a category-framework. If a predicate 'blue' is denied of the subject 'the pot', we are prepared to locate the subject in the category of coloured objects. If the proposition is indeterminate (that is, neither true nor false) because the subject term is empty, its choice-negation will also give another indeterminate proposition.

An exclusion negation ignores the category-framework. Let '~' represent choice negation and the horizontal over the letter represent exclusion negation or complementation. Writing '*h*' for 'it is the case THAT' (cf. Frege's horizontal), we can define exclusion negation as follows:

'$\bar{P}$' $=_{\text{df.}}$ '$\sim hP$' = 'it is NOT true that' '$\bar{P}$'

Writing 'T' for 'true', 'F' for 'false' and 'I' for 'neither true nor false' as before, we can set up the following truth tables:

Choice-negation

P	$\sim P$
T	F
F	T
I	I

Exclusion-negation

P	$\bar{P}$
T	F
F	T
I	T

Thus, '*Fa*' may be indeterminate while its exclusion negation is true.

My contention is that Nyāya seems to be favouring a sort of choice-negation and this is not surprising when we think that Nyāya has always chosen to work within some (that is, the Vaiśeṣika) category-framework. But the Buddhist seems to be favouring a sort of exclusion-negation and therefore rules that negation of the indeterminate is true. In fact, the Nyāya concept of negation is more radical than what the idea of choice negation implies. We will have occasion to discuss negation further in the next chapter.

The Nyāya and the Buddhist position might be encapsulated in the following two alternative model theories.

For Nyāya, a model of the language is a pair <D,*f*> where the first component, *D*, is any non-empty set of actual things, that is, things that are there and can be experienced or established by some accredited source of knowledge (*pramāṇa*). The second component, *f*, is a function assigning sets to singular terms and predicates as follows:

> $f(a)$ is a unit set for each singular term a.
> $f(P)$ is a non-empty set for each 'non-complex' predicate letter P.

For the Buddhist, a model of the language can be stated as above except for an expanded ontology. In other words, *D* is taken here to be a set of Meinongian objects, some of which are actual and others are fictional. The following thesis is rejected by the Buddhist but maintained by the Nyāya:

> T_1 $f(P) \neq 0$ (where 'P' is a non-complex predicate).

We can summarize Udayana's reasons for accepting T_1 in this way:

> (a) If $f(P)$ were empty, then the SENSES of P cannot be learned.
> (b) If $f(P) = f(Q) = 0$, then the senses of P and Q cannot be distinguished.

Nyāya also accepts a second thesis:

> T_2 Only some complex predicates can be empty.

The suggestion is that logically non-complex concepts can be LEARNED only in connection with its exemplification. Thus, *unicorn* could not be understood, that is, would be unintelligible, unless it were logically complex. Thus, it should unpack as a combination of several simple, non-complex concepts or properties.

4.8. THE PAN-FICTIONAL APPROACH OF BUDDHISM

In order to escape the complexity of multivalued logic, B. Russell extended the concept of false statement to include sentences with empty descriptions as their subjects. He was rightly criticized by P.F. Strawson on the ground that in ordinary language the existence of some thing denoted by the subject of a sentence is a necessary condition of its utterance's being true or false.[19] Strawson's theory can, in fact, be systematically developed only with the assumption of more than two truth-values. One might also gather from this controversy that a multivalued system is inescapable if logic is drawn closer to ordinary language. Besides, certain paradoxes can, perhaps, be better tackled in a multivalued system.

However, the Buddhist's insistence that we can and do make statements with empty subject terms need not be taken as a plea for accepting a third truth-value 'neither true nor false' ('indeterminate') to be attached to such statements. His argument is probably like that of A. Meinong who wants us to accept the fact that there are UNREAL objects which can be spoken about, can be thought of or desired. We may describe an unreal object like the rabbit's horn as having a property or characteristic, such as non-momentariness (or, even the lack of potentiality to produce something). Thus, a term expressing such an unreal object can very well be used as a 'disagreeing example' or as the subject term of the contraposed version of the universal concomitance between existence and momentariness.

The Buddhist, in fact, would like to put all the objects over which our thoughts and other psychological activities may range at the same level; and this will include not only (a) things which do exist now (that is, which are assumed to be existent by the common people or by the realist) but also (b) things which do not exist now (that is, past and future things), (c) things which are non-actual (viz., the rabbit's horn), and also (d) things of which it would be a logical contradiction to say that they exist (viz., the son of a barren woman). One point is common to all of these four groups, and this is that we can think about them and our mental activities can be directed toward all of them. In their theory of objects, the Buddhists were not interested in ontology or in the metaphysics of being. If this opens the door to idealism, it may be

[19] P.F. Strawson [1950].

welcome to the Buddhist (because that would simply prove the Yogācāra point that objects are integral parts of, in fact, indistinguishable from, consciousness). Even without giving in to idealism, the Sautrāntika Buddhist may maintain this theory of objects with due modification while emphasizing that the REAL objects are only momentary point-instants which are beyond the range of ordinary experience.

5

Negation and the Mādhyamika Dialectic

CHRONOLOGICAL NOTE. For Nāgārjuna, see Chronological note, chapter 1. Bhāvaviveka was an important Mahāyāna philosopher, who came after Diṅnāga. He wrote among other things a commentary on Nāgārjuna's major work. He criticized the Prāsaṅgika Mādhyamika school as established by Buddhapālita before him. Bhāvaviveka was the chief exponent of the Svātantrika Mādhyamika school. It was Candrakīrti who was the greatest Prāsaṅgika Mādhyamika philosopher and critic of Bhāvaviveka. Candrakīrti should be placed between Bhāvaviveka and Dharmakīrti.

Some useful criticisms of Nāgārjuna's philosophic views are to be found in Kumārila's writings as well as in the works of some Nyāya-Vaiśeṣika philosophers.

5.1 THE MĀDHYAMIKA ATTITUDE—'EMPTINESS'

There is a sense in which the Mādhyamika position may be considered logically unassailable. But I wish to emphasize here the qualifying phrase 'there is a sense in which', This sense has commonly been misunderstood and attempts have been made from the time of Nāgārjuna onwards to criticize and repudiate the Mādhyamika position on logical grounds by showing the paradox to which his position might lead. But in his *Vigrahavyāvartanī* Nāgārjuna has convincingly answered this criticism based on logical paradox. Contrary to what the opponent of the Mādhyamika might believe the prevalence of logical paradoxes supports the Mādhyamika position instead of refuting it.

The Mādhyamika is sceptical of all other philosophical systems. He does not believe in the reality (in the so-called ultimate sense) of

phenomenal plurality. He denies that the ultimate truth can be relative or that existence can be dependent on anything else. His philosophical endeavour consists in showing the unreality (or, rather the unjustifiability) of the pluralistic order envisaged by our common experience and thought. He comes very close to the spirit of the Advaitins in this respect. Both, the Mādhyamika and the Advaitin, seem to be in favour of some sort of Absolutism in philosophy. But the Advaitin seems more committed to a metaphysical position in relation to which he seeks to evaluate ordinary thoughts and experience. The Mādhyamika, on the other hand, tries to maintain a noncommittal attitude in ontology.

Both the Mādhyamika and the Advaitin seem to agree on another point. The ultimate truth, be it *śūnyatā* (emptiness) or Brahman, always eludes our ordinary experience and conceptual thought; it is presumably accessible only to a direct but somewhat mystical experience, through the penetrating insight or intuition of a particular kind of person.[1] Thus, it may be observed that both of the two schools tend to unlock the door to mysticism in philosophy.

But 'mysticism' or at least 'cognitive mysticism' need not be treated as a derogatory term. For, as we realize more and more the limits of language in our analytical struggle, the idea of something inexpressible may well dawn in our mind, although it would be difficult to make a logical appraisal of this 'inexpressible'. Both the Mādhyamika and the Advaitin seem to have been drawn toward this position in philosophy.

'Absolutism' might not be the right term for what I have in mind. For the position I think is closer to Mādhyamika and amounts to academic scepticism. I therefore do not think that modern Mādhyamikas are quite right in denouncing any interpretation which happens to mention the term 'Absolutism'. Absolutism is not always Dogmatism. Non-dogmatism in its extreme form can be a form of scepticism—a sort of non-dogmatic absolutism. I would like to suggest that the proper understanding of the kind of scepticism non-dogmatic Absolutism upheld by the Mādhyamika school ought to produce an incentive to strike a middle course between excessive naïveté and excessive scepticism. Madhyamika is not *blind* scepticism, or nihilism. The doctrine of *śūnyatā* 'emptiness' is, in fact, the critique of all views, all philosophical systems. But it is my contention that this doctrine may be dangerously misinterpreted not only by its opponents but also by its so-called proponents to the effect that it actually DISPROVES all views, all philosophy. If any-thing, this doctrine simply shows that it is neither proper nor is it logically (or, dialectically) justifiable to regard any particular

[1] Nāgārjuna [MK], verse 9, chap. 18.

metaphysical system as absolutely valid. I may quote T.R.V. Murti's remark to make my position clear: 'The Mādhyamika dialectic is not refutation; . . . Refutation is the rejection of an opponent's view by an interested party having a view of his own to establish. A critique is the disinterested analysis of Reason by itself.'[2]

By making a significant use of the earlier Buddhist doctrine of 'dependent origination' (*pratītya-samutpāda*), Nāgārjuna exposes the relativity (that is, mutual dependence) of all concepts and thereby claims that they cannot be considered real from the absolute point of view. The obvious assumption here is that reality should be self-sustained, independent and self-standing. Nāgārjuna, in his *Madhyamakaśāstra*, examines a number of metaphysical and popular concepts such as 'time', 'space', 'movement', 'cause', 'agent' and 'occurrence', and shows that each one of them will lead to some kind of inconsistency or absurdity when it is held to be absolutely real. The general pattern of his argument can be summed up as follows. If we assume any object x to be independently existent, then either we cannot give any consistent (rational) account of that object, by which we can avoid logical contradiction (cf. *na yujyate*), or our assumption of its independent existence will lead to some absurd consequence which will run counter to our experience (cf. *nopapadyate*).

In verse 18 of chapter 24 of [MK], Nāgārjuna establishes an identity relation between such terms as 'emptiness', 'dependent origination', and 'the middle way'.[3]

> Whatever is dependent origination, (is what) we call 'emptiness'.
> That (again) is (called) dependent designation, (and)
> That is alone the middle way.

[2] Murti, pp. 145–6. I, however, differ from Murti's approach.

[3] Alex Wayman has claimed that all the five modern interpreters of the Mādhyamika system (Stcherbatsky, Murti, Jacques May, Robinson, and Streng) mistranslated and misinterpreted this particular verse. See Wayman, pp. 144–5. I beg to disagree. My translation supports Stcherbatsky's interpretation which is again based upon the concluding sentence of Candrakīrti's commentary on this verse. Wayman's rendition of the first two sentences of Candrakīrti's commentary is, in spite of its ingenuity in the manipulation of Sanskrit grammar and syntax, clearly not compatible with what Candrakīrti says unambiguously at the end of the passage. Wayman, if I understand him correctly, seems to say that it is the *dharma* that HAS origination in dependence and is called 'voidness' *śūnyatā*. But we may say with Candrakīrti that 'the origination in dependence', which is the same as 'the lack of origination by own-nature' (*svabhāvenānutpāda*), is what is emptiness.

Following Candrakīrti's commentary we can set up an equation of this type:

> Dependent origination = Emptiness = Dependent designation = The Middle Way.

The 'middle way' alluded to in this verse is just the avoiding of the two extremes of annihilationism and eternalism. This idea, in fact, goes back to the old discourse of the Buddha and Kātyāyana. Nāgārjuna refers to this discourse and Candrakīrti comments that it occurs in all *nikāyas*. (MK., chapter 15, verse 7, and comm.)

Candrakīrti notes that emptiness, whose mark is the lack of NATURAL origin or origination by itself, is determined to be the Middle Way because it practically results in the avoidance of the two extremes, existence or production and non-existence or destruction. What lacks origination-by-itself lacks existence or production or emergence, and having lacked emergence it lacks disappearance or destruction or non-existence. Thus, 'emptiness' means the Middle Way. (See comm. on verse 1, chapter 24, MK.)

The identification of dependent origination and dependent designation (or, conception, 'désignation métaphorique'—Jacques May) requires some further comments. A. Wayman interprets *upādāya prajñapti* as 'designation when there is dependence'. He has also culled a list of examples illustrating 'dependent designation' from his reading of Tsoṅ-kha-pa's commentary on chapter 6 of Candrakīrti's *Madhyamakāvatāra*. In *Prasannapadā*, Candrakīrti mentions at least one example. The list given below is based on Wayman's list (see Wayman, p. 146):

	Depending upon	*Designation*
1.	the five personality aggregates (*sakandha*)	'self'
2.	set of wheels, axle, etc.	'chariot'
3.	the seed, etc.	'sprout'
4.	collection of six, viz., earth, water, fire, air, space, and consciousness	'man'
5.	parts of rope, etc.	'snake' (in a snake-rope illusion)
6.	causes and conditions	'emptiness'

This list throws some light on the notion of dependent designation. As far as I can see, dependent origination and dependent designation are but two different ways of referring to the same notion—emptiness. We

might say that just as the evening star and the morning star denote the same object but have different senses, so also do dependent origination and dependent designation designate the same nominatum although they might have different senses.

Candrakīrti glosses 'dependent origination' as the appearance or emergence of something (sprout, perception, etc.) depending upon the 'causes' and 'conditions' (*hetu* and *pratyaya*). 'Dependent designation' means the act of designating something, viz., *the chariot*, being dependent upon other things such as the set of wheels and the axle. Both these phrases describe the same entity, emptiness. The first expression describes emptiness from the point of view of metaphysics; the second describes the same, non-dual emptiness, from the point of view of epistemology. In other words, the first eliminates the metaphysics of causality and replaces it by the theory of origination through dependence only. The second exposes the futility of linguistic designation and thereby denies the possibility of any conceptual knowledge of reality and replaces it by the notion of designation through dependence only. All our designation is 'synthetic' in operation in which we SYNTHESIZE various elements into something in order to designate it. In short, dependent origination is a principle that holds between objects while dependent designation holds between the objects and our awareness/consciousness of them. But in both cases we end up with emptiness because we are forced to realize the lack of 'independent' origination or origination by 'own nature'. Emptiness results from the lack of 'independent' origination in the first case, and from non-origination and the consequent lack of absolute designation in the second case.

Nāgārjuna avoids both of the two extreme positions, annihilationism and eternalism. It will be argued here that he does not intend to REJECT one position in the sense that he would be willing to accept the contradictory position. He disavows each position because he believes that each position will eventually lead to some absurd consequence when one asserts it to be absolutely valid.

Nāgārjuna explains his 'emptiness' doctrine as implying two levels of truth, the 'concealing' (*saṃvṛti-satya*) or conventional and the ultimate (*paramārtha-satya*).[4] The conventional plane rests on untested postulates and presuppositions. An examination of these presuppositions through the very logical categories endorsed at the conventional level only manifests their inherent inconsistencies. The ultimate truth

[4] Nāgārjuna [MK], chap. 24, verses 8–10.

cannot be grasped by language. (This is a very fundamental Buddhist doctrine, as we have seen in chapter 1, section 3 end, and Nāgārjuna announces it in unmistakable language). But there is, at the same time, no other way by which one can teach the ultimate truth. Therefore, use of conventional language is made to expose the futility of language as an expression of the ultimate truth. And this procedure should, as Nāgārjuna expects, lead one through indirection, to the point where one would be able to grasp the ultimate truth, the inexpressible. Nāgārjuna also warns against any sort of dilettantism with regard to his doctrine of emptiness: Like a snake grasped in the wrong way or a science wrongly applied, 'emptiness' misunderstood may destroy those of weak intelligence.[5] Moreover, Nāgārjuna says: When 'emptiness' is comprehended, all views become comprehensible; but when 'emptiness' is not comprehended, all views become incompatible.[6]

Before I conclude my exposition of Nāgārjuna's position, I would like to make a remark about the translation of the term '*śūnya*' as 'empty'. The term is the same as that for the mathematical concept zero, which was invented by the Indian mathematicians slightly before the time of Nāgārjuna.[7] It was left to Nāgārjuna to make a very significant use of this mathematical concept in philosophy. '*Śūnya*' means *zero* in mathematics; it is a symbol which has no absolute value of itself but only has a place value. To say that a concept is *śūnya* means that it is like the zero because it has no absolute values of its own but has a value only with respect to a position in a system. The mathematical concept of zero fits so nicely with Nāgārjuna's doctrine of *śūnyatā* that one wonders whether Nāgārjuna coined this term under the influence of the mathematicians. One might even suggest 'zeroness' as a suitable translation of '*śūnyatā*', but only at the risk of being guilty of neologism.

5.2. TWO LEVELS OF TRUTH

Buddhism, or the doctrine of the Buddha, is based upon the doctrine of 'two truths': the 'concealing' truth or the world of convention, and the ultimate truth, the absolute. Those who do not comprehend the

[5] Nāgārjuna [MK], chap. 24, verse 11.

[6] Nāgārjuna [MK], chap. 24, verse 14.

[7] The zero as well as place-value was clearly in use in the mathematical texts of the first centuries AD. See W.E. Clark, p. 228. I am assuming that the concept of zero was present even at the time of Piṅgala's *Chandas-sūtra*, a work on prosody, of about 200 BC. See P.V. Kane, Vol. v, Pt. 1, pp. 699–701.

distinction between these two truths do not comprehend the essence or 'deep' significance of Buddhism (MK, chapter 24, verse 9). Accordingly, all the discourses of the Buddha can be classified into *nītārtha* 'absolute' or 'ultimate', and *neyārtha* 'practical' or 'conventional'.

The conventional is called *saṃvṛti* or *loka-saṃvṛti*. Candrakīrti suggests three possible interpretations of the term *saṃvṛti* based upon its etymology: (a) complete covering or the 'screen' of ignorance which hides truth, (b) existence through dependence or mutual dependence only, and (c) worldly behaviour or speech behaviour involving designation and designatum, cognition, and cognitum. (See comm. under MK, chapter 24, verse 8.) The third interpretation seems to offer some useful insight into the nature of *saṃvṛti*. Whatever is expressed in our speech behaviour along with the speech behaviour itself constitutes the realm of *saṃvṛti*, the 'conventional', the 'practical'.

Designation or application of words or names depends upon the attribution of some *nimitta* 'condition' or 'quality' or 'ground'. Something becomes the 'object of consciousness' (*citta-gocara*) through some *form* which we can call the 'condition' or 'ground' (*nimitta*) for applying a name to it. Thus, designation is based upon the superposition of a 'condition' or a 'quality' and the designatum becomes a myth created out of it. (Cf. 'the ground for application' in chapters 1, 2, and 3.) But, Candrakīrti notes, the realm of designation and designatum, the realm of knowledge and its objects, which is the same as the conventional world of ours, has a great pragmatic value. Nāgārjuna says: 'The ultimate truth cannot be instructed (described) without resorting to the 'conventional (speech) behaviour' (*vyavahāra*). And if the ultimate truth is not understood, *nirvāṇa* cannot be realized' (MK, chapter 24, verse 10).

This doctrine of 'two truths' can, however, be criticized on obvious grounds. One may be rather suspicious of this bifurcation of truths into two levels. Kumārila, for example, has argued that it is difficult to see how truth can be of one kind at the conventional level and totally different in the ultimate-plane. Kumārila raises a practical question which casts honest doubt on the issue of this gradation of truth. The so-called conventional or 'concealing' truth (*saṃvṛti*) is actually, as Kumārila rightly observes, a euphemism for untruth (*mithyā*) or unreality.[8]

Truth cannot be of two types. If something, say the causal law, is held to be true at the 'concealing' level, it can mean EITHER (i) that the

[8] Kumārila, *Nirālambanavāda*, section, verses 6–10.

causal law is actually unreal, OR (ii) that the causal law CONCEALS the actual state of affairs, that is, the ultimate truth. The Mādhyamika position is not equal to that of the Lokāyata Cārvāka who would probably categorically assert that the causal law is unreal. The Mādhyamika would rather accept second alternative and maintain the reality of the causal law at the conventional level only. Kumārila claims that this is a kind of philosophical 'double-talk'. He argues that reality at the 'concealing' level is, in fact, indistinguishable from unreality. Unreality of everything at the 'concealing' level can be maintained only if we are quite clear about what truth is like at the ultimate level, which is supposed to be concealed by the 'concealing' level. But, as we have already noted, short of some mystical intuition (cf. *aparapratyaya*), this ultimate truth or *tattva* cannot be comprehended. It has already been said that it is also not describable in language. Such being the case, a realist like Kumārila feels that it is unfair to divide truth into two levels and thereby imply the unreality of everything at the 'concealing' level. Besides, there does not seem to be any common characteristic shared by the ultimate and the conventional, and therefore, we cannot denote both of them by a common name 'truth' (*satya*).[9]

The Mādhyamika may reply that this is not a fair criticism of his philosophical motivation. He contends that cause and effect are only concepts which are hypostatized by the objectificatory bias of human understanding. But if we assume these concepts to be metaphysically (ultimately) real, we face logical antinomies or other absurdities. It is just because of this difficulty, that is, just because of the predicament that we get into when we take our working hypotheses to be true and final, that the Mādhyamika wants to leap to the ultimate level and rule that from the ultimate point of view, cause and effect are EMPTY concepts. But the Mādhyamika does not deny for a moment that these concepts are believed to be real by laymen and that these concepts have, at least, some pragmatic value in the phenomenal world. But as soon as some pretentious philosopher takes them to be ultimately real, he makes a gross mistake.

The realist may rejoin that determination of cause and effect is not altogether impossible in practical life, provided we learn to be a bit 'tolerant' of logical antinomies. If the belief that A is the cause of B is not found to be invalidated by subsequent tests and experiences

[9] Kumārila, *Nirālambanavāda*, section, verses 7 and 8.

within a reasonable time limit, it will be improper not to accept this belief as true. As far as I can see, the Mādhyamika would have no objection to accepting such tested beliefs as provisionally true, that is, true at the 'concealing' level. He is only denying their finality or ultimateness. Insofar as the Mādhyamika wishes to leave the question open, his attitude seems to be that of healthy caution and as such it is a very useful attitude in both philosophy and science. But, insofar as he commits himself to the assertion that cause and effect are actually indeterminable, he is open to the criticism that he is avoiding the issue.

The Mādhyamika may say in his defence that apart from some pragmatic value he does not see any logical reason for accepting the concept of cause and effect as possessed of any intrinsic reality. In fact, all phenomena are, according to the Mādhyamika, indeterminable and indefinable; they cannot be existent in their own right.[10]

5.3. THE INDETERMINACY OF THE PHENOMENAL WORLD

The notion of the indeterminableness of the phenomenal world requires some comment in this connection. An Advaitin absolutist, as Śrīharṣa rightly notes, will join hands with the Mādhyamika in regarding the phenomenal world as indeterminable in character.[11] A phenomenon is, in some sense, a perceived fact and thus it cannot be regarded as a MERE fiction in the sense that the son of a barren woman would be regarded as a fiction. It is, therefore, conceded that the phenomenal world has a provisional existence. In fact, if the phenomenal world were a non-entity, all practical activities would have been impossible, and even ethical and spiritual disciplines would lose their significance. Thus, it is asserted that this world of phenomena is neither real nor unreal, but logically indeterminable and unjustifiable. This indeterminacy of the phenomenal world is called, in the language of Nāgārjuna, 'the character of dependent origination of everything' or 'the *śūnyata* (emptiness) of everything'.

Here, we are actually faced with an apparent contradiction which is very interesting. Each phenomenon is logically indeterminable; it can

[10] Nāgārjuna, [MK], chap. 18, verses 5–8.

[11] Śrīharṣa, p. 42ff. Śrīharṣa, however, points out the distinction between the Mādhyamika and the Advaitin. See also S. Mookerjee, pp. 138–47.

neither be said to exist, nor not to exist, nor both, nor neither.[12] When these four alternatives are thus denied, the phenomenon becomes indeterminate, or *śūnya* 'empty' (cf. *catuṣkoṭi-vinirmuktaṃ śūnyam*), that is devoid of any absolute value (cf. 'zero'). The ultimate is also indeterminable, ineffable. In fact, the ultimate is the *śūnyatā* (emptiness, indeterminableness) of everything, every phenomenon. Following this line of analysis, we gain a better understanding of the inner significance of Nāgārjuna's famous epigram:[13]

> Worldly life differs in no way whatsoever from *nirvāṇa*,
> And *nirvāṇa* differs in no way whatsoever from worldly life.
> Between the 'extremity' (*koṭi*) of *nirvāṇa* and that of worldly life
> There does not exist even the subtlest difference.

The Absolute and the Phenomenal are not different. This world, when it is understood with reference to causal condition and plurality, is called the Phenomenal or the 'concealing' (*saṃvṛti*) one. But, when it is understood without reference to such causal conditions and plurality, it is called Nirvāṇa, the Ultimate.[14]

Thus, we see that there is a sense in which it will be unfair to criticize the Mādhyamika on the ground that he bifurcates truth into two levels. Phenomenon is the 'concealing' form of the ultimate, but it is not actually different from the ultimate. It thus needs to be emphasized, even at the risk of repetition, that the doctrine of emptiness does not actually consist in the rejection of the phenomenal world, but in the maintenance of non-committal attitude toward the phenomena and in the nonacceptance of any theory of the phenomenal world as finally valid.

In modern logic, we frequently talk about validity, consistency, and inconsistency of schemata. If we talk in terms of truth-functional logic, we can define a truth-functional schema to be VALID if it comes out true under every interpretation of its letters. And, a truth-functional schema is CONSISTENT if it comes out true under some interpretation of its letters; it is INCONSISTENT if it comes out true under no interpretation of its letters.[15] These three well-defined terms may somewhat loosely be used to explicate the differentiating marks of the Mādhyamika doctrine of 'emptiness' (*śūnyatā*), the Jaina doctrine of non-onesidedness (*anekāntatā*), and any other classical theory of the phenomenal world, such

[12] Nāgārjuna, [MK], chap. 18, verse 8.
[13] Nāgārjuna, [MK], chap. 25, verses 19–20.
[14] Nāgārjuna, [MK], chap. 25, verse 9.
[15] W.V. Quine, *Methods of Logic*, p. 28.

as that of the Nyāya-Vaiśeṣika. A philosophical system like the Nyāya-Vaiśeṣika puts forward a theory of the phenomenal world and asserts that it is a valid theory of reality. To be more specific, the Nyāya-Vaiśeṣika expounds the notion of causality and believes that there are causes and their effects and hence the theory of causality is valid. The Mādhyamika claims that each theory of the phenomenal world can be shown to be internally inconsistent or absurd. The Jaina claims, on the other hand, that each theory of the phenomenal world is consistent only with some particular point of view, although it is not absolutely valid.

For the sake of showing the contrasts in general terms, we may use the following tabulations. Suppose '*X*' represents a particular theory of reality:

The Mādhyamika:	*X* is inconsistent because if we can assert '*p*' in *X* we can also assert 'not *p*' there.
The Jaina:	*X* is consistent in the sense that given certain presuppositions or a particular point of view, *X* will follow from it. In other words, an interpretation can be given to *X* to make it true.
The Nyāya:	*X* is valid because it can be shown to be derived from both ascertainable and self-evident truths.

It will be seen here that the Jaina will be in agreement with the Mādhyamika in denying absolute validity to any theory of reality.

5.4. THE PARADOX OF 'EMPTINESS'

Emptiness, as I have tried to argue earlier, transpires into the theory of indeterminableness of *saṃvṛti* (the phenomenal world). But this theory of indeterminableness of the phenomenal world is not a theory in itself. This remark should not be treated as mere verbal jugglery for it is possible to give a coherent sense to the claim just made. The theory of emptiness is itself not a theory simply because it cannot be successfully negated. I shall try to explain this more clearly.

The notion of the indeterminable is such that it is possible for one to assert the apparently self-defeating proposition: What is indeterminable IS NOT and, at the same time, is indeterminable. Thus, the negation of the indeterminable will also be indeterminable. This remark undoubtedly runs counter to our ordinary sense of logic. But let us try to understand its significance.

Suppose I maintain that *x* is indeterminate. This means that either no predicate can be SUCCESSFULLY applied to *x*, or that all predicates,

including the contradictories, are AT ONCE applicable to *x*. In order to negate the proposition '*x* is indeterminate' successfully, one has to show that a particular predicate '*P*', and not its contradictory 'not *P*', will be applicable to *x*. In other words, if we cannot show that '*P*' is applicable in this way to *x*, we cannot attach any possible sense to our straight denial of the proposition '*x* is indeterminate'. But the whole point of Nāgārjuna's dialectic reasoning is to argue that no such predicate '*P*' can be found to be applied to *x* without involving us eventually into some kind of commitment to also apply 'not *P*' to *x*.

Another putative way of refuting the proposition '*x* is indeterminate' will be to treat 'indeterminate' as another predicate and then try to follow the same procedure as Nāgārjuna did to prove the proposition false. In other words, if we accept, '*x* is indeterminate', then following Nāgārjuna's method we will be eventually led to accept its contradictory '*x* is NOT indeterminate'. This was actually the way by which most Naiyāyikas (for example, Uddotakara)[16] tried to refute Nāgārjuna. But this may not be a fair refutation. To call 'indeterminate' a predicate is to commit a 'category mistake'—a mistake which seems to have partly inspired some of the semantical paradoxes (see next section).

We may note that just as it has been remarked that the theory of 'emptiness' is not itself a theory, it can be said that the predicate 'indeterminate' itself is not a predicate. For, 'indeterminate' in this context means 'the failure of the applicability of any predicate', and if 'the failure of the applicability of any predicate' is predicated of something then that very thing cannot be called 'indeterminate' (for no predicate has been applied to it).

There are two ways of understanding this paradox of indeterminacy: a simple way and a more sophisticated way. If we accept the first, it can be easily shown that this is not a genuine paradox. But the second way is philosophically more interesting, and perhaps, closer to the spirit of the Mādhyamika school.

5.5. SOPHISTRY AND THE SEMANTICAL PARADOXES

A vague awareness of some sort of semantical paradox can be found in the early tradition of the eristic and sophistry (that is, the *vāda-jalpa-vitaṇḍā* tradition) which was quite prevalent in India even before Nāgārjuna. One of the twenty-four typical sophistical refutations (*jāti*)

[16] Uddyotakara, under *Nyāyasūtra* 4.1.40.

found in the *Nyāyasūtra*, chapter V, is called *nityasama*. The sophistical trick which serves as a 'futile' rejoinder in this case can be illustrated with reference to a particular example:[17]

> The proponent state his thesis: 'Sound is impermanent.' The opponent rejoins: 'Is this predicate "impermanent" a permanent predicate (of sound) or not? If it is a permanent predicate, then sound becomes permanent. If it is not a permanent predicate, then also sound becomes permanent.'

In other words, the situation becomes paradoxical if one is allowed to raise such questions.

Uddyotakara[18] remarks that one should not be allowed to raise such questions because 'a thing is impermanent' means that it has impermanent existence and one cannot ask whether what has impermanent existence has permanent existence or not (without contradicting oneself). But this interpretation of Uddyotakara destroys the paradoxical situation and does not seem to be giving the actual meaning of the original sophistry. Thus, Uddyotakara, taking the simplest way, explains the paradox as a pseudo-paradox and reduces the sophistry to nonsense very easily. Uddyotakara's comments seem close in spirit with the modern device to distinguish the 'scope' of the quantifiers to resolve the air of paradox. We may distinguish

a) $(x)(t)($ x is sound $\rightarrow$ x is impermanent$)$, and
b) $(x)($ x is sound $\rightarrow$ (t) x is impermanent$)$.

Roughly speaking, in the ordinary mode of speaking, x's being sound implies x's having some permanent property. This is represented by (a). But (b) points out that x's being sound implies that *x* has properties with temporal significance—some properties are not so.

Both Udayana and Varadarāja give an interpretation which implies a sort of semantical paradox.[19] Udayana says that the predicate 'impermanent' in the given example is actually a variable for any predicate property. The sophistical refutation consists in asking whether a particular predicate, that is, a predicate property, is predicable of itself or not. In most cases, it may be an utterly perverse (meaningless) question, for example, 'Is the predicate 'blue', that is, the blue colour, blue

[17] See Vātsyāyana under *Nyāyasūtra* 5.1.35–6; Matilal [2001].

[18] Uddyotakara, under *Nyāyasūtra* 5.1.35–6.

[19] Udayana, *Nyāyaparisista*, pp. 65–8. Varadarāja, pp. 300–306 of the *Pandit* journal.

or not?' Thus, Kaṇāda, while he was constructing his category-framework, stated it as a law that a particular colour (such as 'blue') as a quality (*guṇa*) cannot be predicated of that colour blue, or, for that matter, of any other quality (*guṇa*).[20] But, on some occasions, such questions do not smack of immediate perversity, for example, 'Is impermanence impermanent or not?' In whichever way we try to answer either yes or no, we will be led to abandon the original thesis: *x* is impermanent.

A somewhat similar trick is applied against the Mādhyamika position.[21] The purported Mādhyamika thesis is: The phenomenal world is indeterminate, that is, is such that no predicate is applicable to it. Now the question is raised: Whether 'indeterminate' itself is a predicate or not? If it is, then the phenomenal world is not indeterminate because there is at least one predicate which is applicable to it. If it is not, then what is it? To put it in another way, if the proposition 'the world is indeterminate' is indeterminate, then we cannot say that the phenomenal world is indeterminate. And, if this proposition is not indeterminate, then 'indeterminate' becomes a predicate predicating a determinate property of the phenomenal world and thus falsifying the original thesis.

I have already noted the Mādhyamika reply to this criticism: 'Indeterminate' itself is not a predicate; 'emptiness' *śūnyatā* is itself not a theory of the phenomenal world; the assertion that we cannot assert any predicate of some subject *x*, is not itself an assertion asserting any predicate of that *x*. It would, perhaps, be in order for the Mādhyamika to say that the property indeterminacy is itself indeterminate because he would agree that the indeterminate is and is not indeterminate at once.[22] This seems to be somewhat implied by the very concept of indeterminacy.

This admittedly sounds like an attempt to mystify the philosophic issue. But what is probably meant is that the line of demarcation (cf. *koṭi*) between the determinate and the indeterminate, between the Ultimate and the Phenomenal, between Nirvāṇa and Saṃsāra, is itself indeterminate. In other words, we cannot say anything about this line

[20] Kanāda, 1.1.15 '... *aguṇavān... iti guṇalakṣaṇam*'. The word *guṇa* has a technical sense in the Vaiśeṣika system, which is translated as 'quality'.

[21] See Nāgārjuna, *Vigrahavyāvartanī*, verses 1 and 2 and the *vṛtti*.

[22] Perhaps, in a similar vein K.C. Bhattacharyya noted: the indefinite is not and is indefinite at once. See Vol. II, p. 228.

of demarcation. And this is a good reason for believing (if not saying explicitly) that they are indistinguishable, *advaya*, one. Dialectic in this way leads to Absolutism.

If I have suggested earlier that the above critique of indeterminacy brings us closer to semantic paradoxes (like the Liar paradox and the Grelling paradox), I would like to qualify that statement here. The above formulation of what we have called 'the paradox of indeterminacy' is not exactly similar to cases of semantic paradox. A direct and simple way of resolving the said paradox of indeterminacy would be this. The statement 'a thing is indeterminate' is actually a flagrant violation of our generally accepted logical principle which may be stated as 'Everything is either *P* or not *P*'. The denial of this principle would amount to saying 'Something is neither *P* nor not *P*', which is what is practically meant by the predicate 'indeterminate'. Thus, as long as one maintains the logical principle 'everything is either *P* or not *P*', the said paradox cannot arise. This is a good resolution of the paradox but perhaps only at the risk of misinterpreting the philosophical motivation of the Mādhyamika.

The formulation of the elegant and neat logical principle 'everything is either *P* or not *P*' depends, among other things, upon the formulation of a clear cut definition of the sense of 'not', that is, the meaning of negation. In fact, it can be shown that the said principle is simply a way of defining the meaning of negation, that is, assigning a definite meaning to negation for the purpose of constructing a particular logical system. Moreover, the said principle also assumes that each predicate is such that it can be applied truly or falsely to any element in the whole universe of discourse. (For more on negation, see next section.) I would like to suggest that the philosophical motivation of the Mādhyamika is not to deny the said logical principle (which all of us must accept) but to expose the limitation of this principle so that we do not misinterpret its range of application.

Thus, I think the paradox of indeterminacy, on a sober interpretation, brings us to a situation which is quite comparable to the situation faced in some semantical paradoxes. Perhaps, the root of the trouble which confronts us in the semantic paradoxes is of a piece with the root of the trouble faced in this case. And if this is true, then it might be presumed that a comprehensive solution of semantic paradoxes will suggest a convincing solution also of this paradox of indeterminacy. Modern developments in analytic philosophy since the 1930s suggest several

alternative solutions to these semantic paradoxes. It remains to be seen whether some of these solutions will be in any way relevant to the problem posed by the above critique of the Mādhyamika.

5.6. TWO ASPECTS OF NEGATION

Confusion between different shades of meaning of negation has given rise to many puzzles in logic and dialectic. Thus my next point will be to analyse the concept of negation in such a way as will be relevant to the clarification of the Mādhyamika position.

An ordinary negation has roughly two different aspects: denial and commitment. To take the second aspect first, when we say no to a meaningful question we also COMMIT ourselves to say yes to some other question properly formulated. This COMMITMENT may vary in different degrees. When we say 'That flower is not red' we are committed to admit that the flower has some other colour. When we say 'Man is not the creator of the universe' the degree of our commitment is very low. One could even argue in this case that we are hardly committed to accept the view that the universe has a creator.

The first aspect of negation, viz., denial, is present in every negation, but its intensity may vary also. If we read our first example as 'That flower is not-red', or, if we take another example such as 'The body is unconscious', the intensity of our denial is very low. In these cases, we are rather inclined to commit ourselves to some position than deny any particular relation between the subject and the predicate. But our denial is most pronounced in the second case, viz., 'Man has not created the universe'. Failure to realize the degree of intensity of both these aspects of negation has given rise to many problems of philosophy.

Indian grammarians and logicians tried to capture these two aspects of negation by their doctrine of two types of negation, *paryudāsa* (nominally bound negative) and *prasajya-pratiṣedha* (verbally bound negative).[23] In *paryudāsa* type of negation, the 'commitment' aspect largely predominates over the 'denial' aspect, while in the *pratiṣedha* type of negation, it is the other way around. The question whether one can find some sort of a relation of inverse variation between these two aspects of negation is beyond the scope of our discussion here. But

[23] Patañjali under *Pāṇini-sūtra* 1.4.57, 3.3.19. Two verses are often quoted to describe the functions of these two types of negation. See Matilal [1968], pp. 156–7.

I am inclined to add in favor of the Mādhyamika that in some cases of negation, the 'denial' aspect may be so pronounced as to reduce the 'commitment' aspect practically to nullity.

Thus, when the Mādhyamika wants to negate a proposition of his opponent, he can resort to this kind of negation without intending to accept the consequence of his negation, and thereby can successfully maintain a noncommittal attitude. Thus it was that Bhāvaviveka explicitly argued for the strongest kind of negation (*prasajya-pratiṣedha*) while he explained Nāgārjuna's view from the Svātantrika standpoint.[24]

In fact, in order to achieve this strongest kind of negation, the Mādhyamika puts forward his scheme of the conjoint negation of the fourfold (cf. *catuṣkoṭi*) or even the twofold alternatives. When interpreted in this way, the apparent contradiction of the joint negation of the fourfold alternatives will disappear. The Ultimate or Nirvāṇa may actually be said to embody the negation of all predicates (or characteristics), in this extreme sense of negation. When alternatives are denied, 'emptiness' prevails.

In textbooks on modern logic, negation is usually treated as a 'propositional' negation and the sign of negation is usually prefixed to statements as wholes. Negation in this context is defined as follows: the negation of a statement is to count as false if the given statement is true, and the negation is to count as true under any and all circumstances under which the given statement is false.[25] This seems to be a very neat view of negation where the 'denial' aspect is perfectly well-balanced by the 'commitment' aspect. In other words, if we deny a statement *p*, we are committed to accept the truth of its contradictory, viz., *-p*. But, although this view simplifies the elementary laws of our logic, it neglects the extreme form of negation envisioned by the Mādhyamika, where denial of a position does not necessarily involve commitment to any other position.

Just as the Mādhyamika emphasizes the 'denial' aspect of negation, the Nyāya-Vaiśeṣika may be said to be emphasizing the 'commitment' aspect of negation in a somewhat unique way. In a *paryudāsa* type of negation, where the 'commitment' aspect is naturally predominant, Nyāya says that we predicate here 'the difference of the negated item' of the subject. Nyāya, for example, interprets 'the pot is not a cloth' as 'the pot is something different from a cloth'. Here the pot is positively characterized by a qualifier called 'difference from a cloth'. Even

[24] See Y. Kajiyama, p. 304

[25] W.V. Quine, *Methods of Logic*, p. 1.

when we use a strong negation (*pratiṣedha*, verbally bound negative), Nyāya makes the 'denial' aspect subordinate to the 'commitment' aspect. Thus 'the pot does not exist on the ground' is interpreted as 'the absence of pot characterizes the ground', where 'absence of pot' is treated as referring to an objective characteristic of the ground. In fact, the Nyāya move is quite fundamental since it practically denies that there is or should be any affirmative-negative dichotomy of judgments at all.[26] It reduces the 'denial' aspect practically to nullity and treats the negative as an integral part of the predicate.

Two different notions of negation are current in contemporary western writings on what is usually called 'free logic': choice negation and exclusion negation. Our previous example 'That flower is not red' will be a case of choice negation if it implies that the flower has actually some other colour. This notion may fit well with the Nyāya concept of negation, provided we stipulate that 'not' in this case is to be reformulated as a part of the predicate 'not-red'. In fact, the Nyāya interpretation does not ask us to relocate the subject in the extension of any other colour predicate, but tells us to reformulate the predicate as 'not-red' and treat the new predicate as one whole in the extension of which the subject is to be located.

An example of exclusion negation will be

'2 is not red.'

Here, we have to understand that the assertion does not imply any 'other choice'. This idea of negation comes closer to the Mādhyamika concept if only we reinterpret exclusion negation as MERE denial. If G. Frege's assertion sign[27] is read as 'it is the case that' then the exclusion negation will be read as 'it is not the case that', with the Mādhyamika stipulation that the speaker is not committed to state what the case is. Perhaps it is better to see the contrast as one between negation as a predicate-modifier and as a COPULA modifier.

5.7. 'MYSTICISM' AND THE MĀDHYAMIKA SCHOOL

For the rest of the chapter, I shall try to discuss the 'mysticism' hypothesis which is sometimes thought to be consistent with the Mādhyamika position. It is not surprising that Nāgārjuna's dialectic has proved a rich source of mysticism in the Orient.

[26] See Matilal [1968], pp. 92–3.
[27] Frege [Geach and Black], p. 33f.

Two principal features of the Mādhyamika philosophy come very close to what we may call the universal marks of all types of mysticism. First, there is the belief in the possibility of a kind of knowledge which we call revelation, intuition, even direct confrontation with reality. There is the argument that other types of knowledge, that is, knowledge through the senses, reason, and analysis, only move on the surface, *saṃvṛti*, which conceals the ultimate, and hence this second kind of knowledge is subordinate to the first kind. It is maintained that direct intuition is the sole arbiter of the ultimate truth because it neither depends on any point of view, nor does it rely on any symbol (linguistic or other).[28] The implication is that the other kind of knowledge depends on the point of view at which we are placed, or on assumption, which we all implicitly make, as well as on the symbols by which we wish to express ourselves.

Second, there is the belief in unity, which tends to reject all diversities and differences as illusory appearances. The Mādhyamika would say that all these seeming pluralities are just the 'concealing' of the ultimate which is one and unique. This non-dual (*advaya*) conception of reality is, however, based upon logical arguments which try to show the impossibility of any 'own-nature' (*svabhāva*), or of non-being or of causality.

Properly armed with the technical apparatus of logic, one may or may not be able to criticize the arguments of the Mādhyamika. One may be able to criticize them because the supposed absurdities or inconsistencies which the dialectical arguments lead to, may be explained by, or resolved, or assimilated into a more comprehensive system of logic. One may not be able to criticize them because the Mādhyamika can always slip into his non-committal garb and say that he is neither impressed nor interested. If the Mādhyamika arguments leading to absurdities prove to be hidden sophistry, it is only the fault of the opponent's logic and a good reason for not applying logic when we are talking about the ultimate. Candrakīrti asserts emphatically that the fact that logic has limited success at the 'concealing' level is never denied by the Mādhyamika.[29] But one is tempted to add at this point that the paradoxes or absurdities are more like the goal which the Mādhyamika feels his arguments must reach than like problems to be solved by a better and more comprehensive theory.

[28] Nāgārjuna [MK], chap. 18, verse 9.

[29] See Candrakīrti's comm. of Nāgārjuna's [MK], verse 3 of chap. 1 (pp. 68–9 of Bibliotheca Buddhica edition).

Another dominant idea of all mystical philosophers is the idea of the inexpressible. The Ultimate is inexpressible. This idea occurs also in the Mādhyamika philosophy. If the moral of all this is that our comprehension or thought always outruns our language by which we tend to represent what we comprehend, this has a great educative value in philosophy. This can also be taken to be a good challenge to modify, clarify, and reorganize our philosophical theories. But if we interpret this (wrongly, I hold) to mean that we should abandon in despair all attempts at reasoned analysis, then we will find ourselves serving as impoverished mourners at philosophy's funeral.

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